Digital Broadcasting: Review of Regulation

VOLUME ONE

The implications for regulatory policy of the convergence between broadcasting, telecommunications and the internet

New Zealand Government
Te Kāwanatanga o Aotearoa

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Ministry for Culture and Heritage
PO Box 5364
Wellington
New Zealand

http://www.mch.govt.nz

Phone: +64-4 499 4229

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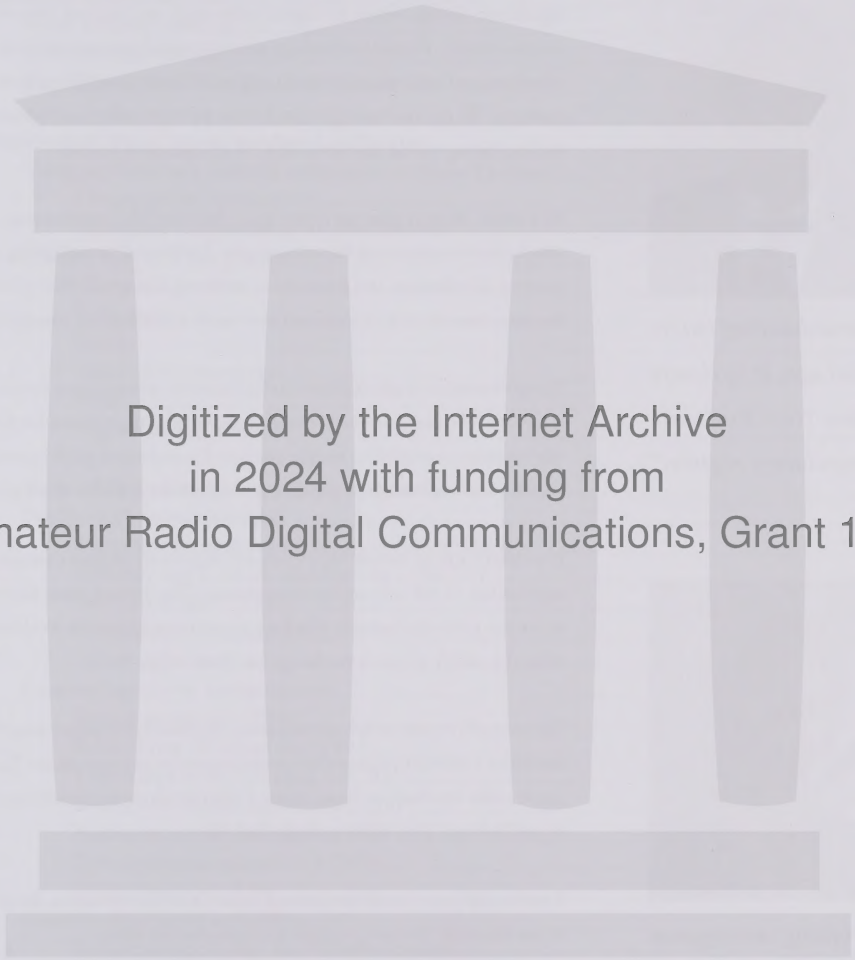

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Foreword

"As broadcasting enters the digital age, it is timely to review New Zealand's regulatory regime."

"Growing convergence between telecommunications and broadcasting means new business models are emerging."

BROADCASTING AND TELECOMMUNICATIONS in New Zealand are experiencing significant change, driven by digital technology and the new ways we can now access content. Digital technology allows material that was once the domain of television and radio to reach us through a PC screen, mobile or personal digital assistant. We can increasingly watch what we want, when and where we want, without being tied to the constraints of a broadcast schedule.

As a result, there is growing convergence between the broadcasting, telecommunications and internet sectors. Traditional broadcasting activities – content, distribution and networks – are being disrupted. New platforms, new business models, new services and new market entrants are emerging.

The government made decisions to facilitate the transition to free-to-air digital television. We recognised the importance of ensuring a future for free-to-air television as a conduit for locally produced content and public service broadcastir which would otherwise be lost in a sea of globalised audio-visual programming.

It is timely now to review New Zealand's regulatory regime to make sure it remair appropriate to the converging environment. The starting point has to be research so we can get a clear picture of where we are now, where the world is heading, and what the policy response to change has been so far.

The research report which accompanies this discussion paper does this, and identifies a number of issues for consideration by policy-makers. The discussion paper seeks feedback on these issues – whether there are priorities, whether chang is justified and, if so, what it might look like.

I encourage you to read the research report and to respond to the discussion pape so we can make the best possible decisions for the future.

TREVOR MALLARD
MINISTER OF BROADCASTING

DAVID CUNLIFFE
MINISTER FOR COMMUNICATIONS
AND INFORMATION TECHNOLOGY

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1. Introduction

Following the launch of digital free-to-air broadcasting in New Zealand, the government committed to undertake a wide-ranging review of the policy and regulation governing and impacting upon the digital broadcasting market. The review's scope extends across the length of the value chain: from content creation and aggregation, through to distribution across platforms and networks.

The central focus of the review is broadcasting regulation, but the terms of reference[1] also require an assessment of the broader regulatory issues that affect broadcasting, such as the impact of convergence, developments in the telecommunications industry and the changing role of intellectual property in the sector.

1.1. Process and Timing

The regulatory review process is constructed in three main stages:

1. Research project commissioned: April 2007
2. Public Consultation on basis of the research project and a draft Cabinet options paper: provisionally September to November 2007
3. Ministers of Broadcasting and Communications report to Cabinet with recommendations: provisionally December 2007.

This research paper constitutes stage one. The research includes a review of the local market and summarises the current regulatory settings relevant to New Zealand's digital broadcasting sector. An analysis of key global trends and international regulatory responses is used as the basis for an assessment of likely developments and key risks in New Zealand's future. The paper concludes by identifying emerging themes which policy makers and regulators need to address. Stage two will develop options which, together with this research report will form the basis of a public consultation, and stage three will summarise all key findings and make final recommendations for government consideration by the end of the year.

The research was drafted by the Ministry for Culture and Heritage (MCH) and the Ministry for Economic Development (MED), with contributions and editorial input from Spectrum Value Partners[2].

1.2. Scope of the research

The objective of the research paper is to review the current regulatory environment of broadcasting in light of developments both at home and overseas, and to summarise issues for further consideration.

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[1] Full terms of reference for Review of Regulation available online at: www.mch.govt.nz/publications/digital-tv/index.html

[2] www.spectrumstrategy.com

In a digital age, the traditional distinctions between print media, film, television, radio, telephony and the internet are becoming increasingly blurred. The scope of the report, therefore, includes the implications for broadcasting regulatory policy of this convergence and also considers some non-legislative responses currently in place both overseas and in New Zealand, such as co-operation, self-regulation and incentives.

Where relevant, the review considers or builds upon other related government work underway, including the Telecommunications Stocktake, the National Digital Strategy, the Digital Content Strategy and the Public Broadcasting Programme of Action.

It should be noted that this report aims to best reflect the current situation in New Zealand, using the most recent, publicly available data and policy statements, as appropriate. It should therefore be considered a snapshot in time of what is a fast-moving, complex, and increasingly global, digital media environment.

The outcomes of this review will be considered in a draft options paper for Cabinet consideration.

1.3. Report structure

The paper starts with an overview of the current market landscape in New Zealand and provides a summary of the current regulatory settings applicable to the broadcasting, telecommunications and internet markets.

There follows an analysis of international trends and regulatory responses, which highlights key developments in technology and changing consumer behaviour. In conclusion, there is a consideration of the prospects and possible scenarios for broadcasting in New Zealand in a multi-platform, converged future.

The report does not make recommendations or propose solutions; rather it highlights key themes and the potential instruments for response.

2. Executive Summary

The media and telecommunications sectors are undergoing a period of profound change. Technology is evolving rapidly, enabling content to be created, distributed and consumed in a variety of new ways. New platforms, new business models, new services and new market entrants are the result. Mobile TV, IPTV, social networking, blogging, and online virtual worlds: none of these 'businesses' existed even a few short years ago. This technology and market evolution is accompanied by dramatic changes in consumer behaviour.

The changes signal new and significant threats to broadcasting's traditional value chain. Growing consumer control, an increasingly global media market and new market entrants' ability to go direct to consumers and by-pass sections of the broadcasting value chain, contribute to a riskier and more competitive environment. In particular, the growth in media choices, availability of global content and the rising cost of reaching mass audiences creates some critical risks to the creation and distribution of local content.

New market entrants and platforms are also subject to significant risk and heightened competition. The telecommunications industry and internet service providers (ISPs) are responding to the converging environment by diversifying their businesses, which relies upon the development of attractive consumer propositions, requiring both investment in infrastructure and the development of new business models. The challenge persists of how to make sufficient and sustainable returns on new platforms and services which have uncertain future growth patterns.

This paper includes a summary of research on the current market status and regulatory environment in New Zealand. This is followed by an analysis of trends across international broadcasting markets and the identification of key regulatory responses. The review's findings suggest that international policy makers and regulators are generally reacting to the same market and technology trends. However, they are adopting a relatively wide range of regulatory responses.

The three main components of the broadcasting value chain, content, distribution and networks, are reflected across the report to provide some logical structure and clarity for the reader. However, it should be noted that the boundaries between these elements of the value chain are becoming increasingly blurred and so some of the issues rightfully appear in more than one part of the value chain (e.g. content distribution). Competition, standards and intellectual property rights issues are considered as key themes across the whole of the value chain

The future role of regulation and its impact on New Zealand's broadcasting value chain is explored through a combination of specific research on the New Zealand market, external experts' views and study of international comparators. A scenario analysis is then used in order to identify some of the most important future risks to New Zealand's broadcasting markets. This analysis provides the basis of the paper's conclusions, which pose a series of questions on policy and regulatory issues that should be addressed in support of developing New Zealand's digital broadcasting environment.

2.1. New Zealand context

Broadcasting is a vital feature of New Zealand's cultural life, having contributed significantly to the growth, development, integration and cultural identity of the nation. Broadcasting is, however, no longer confined to just traditional, linear TV and radio services. Subscription television (pay-TV) has grown and offers linear and on-demand services on both a subscription and pay-per-view (PPV) basis. In addition, a myriad of 'broadcasting-like' services are now available over mobile devices and on PCs, via subscription, pay-as-you-go and for free.

In terms of specific recent developments in New Zealand's traditional broadcasting market, the Māori Television Service (MTS) has launched successfully; pay-TV has reached more than four in ten homes and launched MySKY a personal video recorder (PVR) service; and the Freeview consortium has already launched additional free-to-air (FTA) channels in the six months since its launch. Furthermore, the prospect of a fully digital broadcasting environment, after analogue switch off (ASO) offers both opportunities and risks for consumers and industry. This is particularly so given New Zealand's unique market features: its relative size, distance from other markets, topography and ethnic diversity.

The mobile market, despite only having two major players, has witnessed strong consumer take-up with penetration levels at close to 100%. Both the main players have launched Mobile TV services on a streamed basis and both offer short-form video content. Telecom New Zealand has also recently announced the construction of a WCDMA (3G) network, creating additional opportunities for the distribution of audio-visual content via mobile.

The fact that New Zealand's penetration of broadband has lagged behind many other markets is well documented; however, take-up has been strong throughout 2006/2007. The incumbent, Telecom New Zealand still dominates the market, but as recent regulatory changes take effect, competition is expected to increase with new owners entering the market (both Kordia and Vodafone now own ISPs).

Compared to larger markets overseas, New Zealand has relatively few significant media and telecommunications players, and many of the larger companies are now owned by overseas interests. The industry is already responding to the changing, increasingly competitive media and telecommunications environment, in which content from overseas is ever more accessible over the internet and domestic consumers have an increasing number of media activities competing for their attention. Industry responses to date include further consolidation across the market, and business diversification through expansion onto new platforms and the acquisition of new digital assets.

The limited number of media and telecommunications players and New Zealand's distance from other markets significantly affect the nature of domestic competition, and can impact upon key market features such as pricing and, the quality and diversity of service. This is a concern for policy makers, as the promotion of economic activity and

the protection of the consumer interest is critical in the development of any regulatory framework.

Another key challenge for policy makers is managing the risk associated with media ownership, from both the perspective of encouraging domestic investment and ensuring sufficient market controls. The ownership of New Zealand's major broadcasting players and the current approach to ownership regulation create a potential risk that domestic broadcasting markets may be significantly affected by changes and developments in international markets and law, most notably those in Australia.

The current regulatory framework for broadcasting is relatively 'light-touch' but over time, and given the current trend towards convergence, it has also become quite complex. The current framework consists of a variety of legislative measures and is enforced through a number of regulatory bodies. Its origins lie in an environment with only analogue, linear services and so the framework does not necessarily recognise the implications of digital media growth, technology developments, changing consumer behaviour and the strengthening trend towards convergence.

New Zealand is, however, currently implementing a number of reforms in its telecommunications regulation, in an attempt to encourage further competition and investment. These include the introduction of Local Loop Unbundling (LLU), the provisions for Naked DSL, and the proposed operational separation of Telecom New Zealand. These developments in the telecommunications markets may significantly impact and encourage growth in 'broadcasting-like' services delivered via broadband and mobile.

Despite these recent changes in the telecommunications market, the prospect of a converged environment highlights the complexity of the current regulatory approach. The combination of rapid market development, changing competition dynamics, a complex legislative and regulatory environment, and uncertainty around analogue switch off (ASO) could generate a lack of confidence in New Zealand's broadcasting industry. The provision of local content and New Zealand's production community are particularly vulnerable to changes in investment levels given the potential audience and market size in New Zealand.

2.2. International trends

Markets in Europe and North America have experienced rapid growth in digital media revenues, alongside developments in technology (such as broadband speed, compression and storage options) and a marked consumer appetite for new forms of media. These developments are all having an effect on the nature of the broadcasting value chain. Boundaries between content, distribution and network markets are becoming increasingly indistinct; and trends in both horizontal and vertical integration are apparent in a number of international markets as players compete more broadly and aggressively to attract new customers and maintain their existing customer base.

In a number of international broadcasting markets, internet and mobile are gaining importance as audiovisual media distribution platforms. TV (in the form of broadcast terrestrial, satellite and cable) remains the most prominent and popular platform for both consumers and advertisers. It has, however, become a more complex proposition, offering digitalised content with improved reception quality and greater capacity, allowing the launch of many new services, and such additional functionalities as high definition (HDTV) and interactivity (particularly when delivered via the internet or a hybrid set top box). Radio is also moving into the digital environment, with improved 'CD-quality' reception and the launch of hybrid satellite / terrestrial based subscription services.

Radio and television are both moving online, using 'vodcasting' / 'podcasting', peer to peer (P2P) platforms and streaming services as a means to reach new audiences and take advantage of the internet's capability for user participation. These new online models (e.g. IPTV, VoD, UGC video sites like YouTube, and internet radio[3]) enable a range of 'broadcasting-like' experiences, subject to the availability of high-speed broadband. Many have the added attraction of enabling consumers to interact, select, create, share and store material in a variety of new ways.

Mobile platforms create the potential for personalised content to be distributed to consumers whilst they are on the move. However, the growth of mobile media has been relatively limited to date, with gaming and short-form content winning out over other more TV-like forms. This may be changing with the wider roll-out of high capacity HSPA, 3G and WiMAX[4] data networks.

The availability and take-up of broadcasting-like activities across a number of platforms and via a range of networks demonstrates that 'convergence' is fast becoming a reality and highlights the potential for further growth of digital media. However, a review of these trends in convergence also reveals the level of uncertainty surrounding the pace and direction of future change. This creates a real challenge for any regulator wishing to future-proof interventions and regulatory frameworks, which in turn makes achieving certain specific outcomes, or avoiding others, difficult to manage. Paradoxically however, given the increasingly global nature of digital broadcasting markets and the changes observed, regulators have an increasingly vital, if complex, role to play in protecting the public interest and promoting fair competition.

Regulators and policy makers overseas have responded to the evolving digital environment in a number of ways. In terms of structure, there is a clear trend towards meeting the challenge of convergence through the creation of a single media and telecommunications regulatory authority. This has occurred in several European countries and in Australia and market developments have reinforced existing structures in North America. A number of other countries are also considering such a move. However, the

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[3] IPTV (internet protocol TV), Video on Demand (VoD) and User Generated Content (UGC); a number of these online based services now offer both a sit-back TV-like experience as well as lean forward PC or mobile device based experience.

[4] High-Speed Packet Access (HSPA) and third generation (3G) phones and standards allow networks based on Universal Mobile Telecommunications System (UMTS) to have higher data transfer speeds and capacity; Worldwide Interoperability for Microwave Access (WIMAX) is a telecommunications technology provides wireless data over long distances in a variety of ways, from point-to-point links to full mobile cellular type access.

remit and legislative basis of these authorities varies considerably and continues to evolve as full digital switchover becomes a reality and as new broadcasting-like services become established.

Underpinning the macro issue of the organisation of regulatory frameworks and single authorities, lie a number of regulatory issues specific to different stages of the broadcasting value chain. Content regulation in the converged digital environment has focused on a continuing determination to ensure and promote diversity in media markets, especially in terms of the creation and availability of 'local' content. Regulators are using a variety of measures, which include reviewing media ownership rules, investment in public service broadcasting (PSB), changing PSB funding approaches and revisiting the structure, conditions and obligations of 'broadcasting' licences. Initiatives around media literacy, access and technical standards have also been used to promote the interests of the consumer in increasingly competitive, commercial markets. Finally, a critical issue has been the treatment of the same or similar content across different platforms. Typically, regulators have developed regimes based upon a tiered approach to content standards, with more 'open' platforms enjoying a lighter regulatory environment.

The regulatory trend in terms of distribution and networks has been to treat 'media' markets more like 'telecoms' markets. This has generally led to a focus on the fair operation of competition and the prevention of criminal activity. Governments have therefore frequently used more generic competition and fair trading rules, and criminal or common law as appropriate. There are some notable exceptions to this general trend however, including 'must-carry' rules and special arrangements regarding the rights to events of major national significance.

'Must-carry' rules are used in differing forms across a number of European Union member states to ensure certain channels, usually the PSBs and/or FTAs, are accessible across all major platforms. Specific regulatory measures to ensure access to content are also found in a number of regulatory regimes, and these create parameters within which the acquisition and sale of specific content rights may take place. Measures include 'anti-siphoning' legislation which mandates against the purchasing of monopoly rights over events of national importance, usually live sporting events. These rules are designed to ensure fair (cheap and widespread) access for consumers to content of national significance. Several regulators have looked at the role of market dominance in the area of rights acquisition, but there have been no significant developments in this area as yet. The wider issue of Digital Rights Management (DRM) is an area that, to date, most regulators have preferred to leave to the market and/or to self-regulation.

In terms of network regulation, most regulators have adopted a relatively 'neutral' stance, with technical standards largely left to the market to decide; although issues around network access and spectrum management remain critical areas for regulatory management. Intervention is broadly based upon promoting consumer choice, improving competition, and, in the case of spectrum, ensuring its effective use and generating optimal returns on its sale as a key public asset. A major regulatory debate is developing in a number of key overseas markets around the use of spectrum currently used by analogue broadcasters after analogue switch off (ASO): should it be auctioned to the highest bidder

with the presumption it will be used for mobile communications, or should it be reserved for broadcasters to enable the terrestrial transmission of HDTV?

International trends may not be directly analogous to the situation in New Zealand, but they do provide a body of evidence from countries further advanced in the digital transition that can usefully inform the development of New Zealand policy. Also, given the increasingly global nature of broadcasting markets, these trends are likely to impact directly on the nature and development of domestic markets and so must be understood and incorporated into any regulatory reforms.

2.3. Key themes for New Zealand's future

Based on the analysis of domestic and global trends, the review has developed some high-level market scenarios, assessing how digital broadcasting markets could develop in New Zealand. These scenarios have been used to identify key regulatory risks and to generate a series of regulatory questions for New Zealand as it develops its approach to digital broadcasting.

As part of this review, a range of New Zealand industry stakeholders were interviewed. The responses highlighted certain issues including the changing nature of competition, access to markets and regulatory consistency. These responses were used to inform the scenario analysis and subsequent key questions for further debate.

The review identified four broad future scenarios. Of these, from a public policy perspective, the preferred scenario would be a market where there is substantial diversity of both content (including a significant volume of locally produced content across a wide variety of genres) and services delivered across a range of platforms by a mix of content providers and platform owners. Such content and services should be available to most or all New Zealanders on an affordable and accessible basis.

The review has identified eight key threats to this 'Diversity' scenario, each of which suggests one or more issues for consideration by the government. However, given the nature of a converging media landscape, these questions should be answered not one-by-one, but in a co-ordinated, holistic approach that addresses core policy and regulatory objectives, the appropriate regulatory structure and the correct approach to content, to distribution and to networks across all 'broadcasting' platforms: TV, radio, broadband and mobile.

Exhibit 1: Key issues for consideration

Threats to 'Diversity' scenario	Threats	Issues for consideration
	Cross value chain issues	
1. Lack of clarity and consistency in regulation and policies	1,2,3,6	Should NZ consolidate the regulation of content, distribution and networks into a single regulator and / or consolidate the legal basis for media regulation into a single Act (itself consistent with telecoms regulation)? ...Should NZ take specific action to define and treat converging markets both in terms of competition law and other areas of jurisdictional overlap?
2. Lack of competition in relevant markets and diversity in provision (platform, content and services)	2,4	Should changes to media ownership (including cross-platform) or foreign investment rules be considered?
	2,3	Does NZ need to make any policy adjustments to encourage investment and to ensure the digital broadcasting industries are yielding optimal economic return to NZ (e.g. investment in digital content, infrastructure)?
3. Lack of investment and consequent lack of innovation in digital products and services	8	How should NZ approach its Media Literacy programme in a digital age?
	Content	
	4	How should NZ ensure availability of diverse content across all platforms- particularly local content in a variety of genres including drama, documentaries and children's?
4. Lack of local content - in terms of range, quantity and quality	1,3,6	Are NZ's rules on advertising appropriate in digital age?
	3,4	Should NZ consider changing its public service broadcasting objectives, structure, approach and / or funding (e.g. increased contestability)?
5. Rise of cybercrime	**Distribution**	
	7,8	How can the regulator ensure that disadvantaged groups are able to access digital content (e.g. regulation of broadcasters or EPGs to ensure services for the visually impaired, captioned / signed content)?
6. Inadequate protection for minors and other vulnerable groups	4,7	Should NZ consider regulating the acquisition and/or sale of content rights (e.g. consider anti-siphoning regime)?
7. Inequality of access to digital services for both rural areas and / or disadvantaged groups	1,2,4,8	Is NZ's Copyright framework understood by consumers? Does it work equally for rights holders who are individuals / small companies as it does for large, national or multi-national companies?
	2,4	Are the rights to orphan AV works and archives sufficiently accessible?
8. Significant digital illiteracy and consumer confusion	**Network**	
	1,7	How can NZ ensure the effective use of technical standards to promote fair access and competition?
	2,3	In light of the digital broadcasting network monopolies and duopolies, what, if any, open access regimes should NZ apply across different digital broadcast networks?
	2,3	What form should the post-ASO spectrum allocation regime take?

Policy makers and regulators have a range of regulatory tools that could be deployed in response to these key questions. These tools include legislative intervention and public control, incentives, industry co-operation and self-regulation. Any combination of regulatory tools must underpin a framework that addresses the legitimate concerns of industry players and promotes domestic economic growth, whilst also protecting consumer interests and promoting New Zealand's broader cultural policy. The core objective of any regulatory measure would therefore be to ensure that every New Zealander, irrespective of income, age, location, ethnicity or disability, can benefit from the digital transformation.

3. Overview of the current market landscape

Whilst understanding global trends and the likely future direction of overseas markets is important, policy and regulation must be designed according to the local market environment. New Zealand is a relatively small market, geographically isolated from other markets; it has a unique history and cultural make up; and it includes large swathes of isolated and sparsely populated territory. These factors influence the structure of the market, affecting the range of services available and the pace of new service developments, the number of players, the level of market concentration, the availability of capital for investment and price levels. Consideration of the future role of New Zealand's policy and regulation in a digital media environment must take account of these local market 'settings'.

3.1. Geographical and cultural influences in New Zealand

The small size of the target audience and remoteness of New Zealand makes the economics of the market challenging for new players. This section outlines how New Zealand's geographical location and cultural features affects its media markets, audience behaviour and media consumption.

3.1.1 Geographical influences

New Zealand's relatively small population of just over four million people, its topography, distance from other markets and its diversity all create some unique challenges in the economics of broadcasting and telecommunications in New Zealand.

In terms of population and urban/rural composition, New Zealand has similar attributes to other smaller OECD countries such as Ireland, Norway and Finland. However, New Zealand has a lower GDP and makes relatively low contributions to public broadcasting compared to its OECD peers[5]. Since the abolition of the Public Broadcasting Fee in 1999, New Zealand's funding of local content production has been largely allocated from general taxation through publicly funded agencies on a contestable basis, with some additional direct government funding for non-commercial broadcasting in radio and television.

According to the latest available statistics, broadcasting continues to be the single largest cultural spending category for the New Zealand public[6]. Household spending on broadcasting accounted for 32% of total cultural spending in 2003/04, with an increase of 37%, from $681 million in 2000/01 to $932 million in 2003/04. Much of this increase came from higher spending on audio and visual appliances (television sets and DVD players) and subscriptions to pay-TV services.

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[5] Mechanisms for setting broadcasting funding levels in OECD countries, Unitec School of Communications, December 2005,

[6] Household Spending on Culture 2006, Statistics New Zealand

3.1.2 Audience composition and behaviour

New Zealand audiences are fragmenting over an increasing number of channels, platforms and competing media. In the last decade, the average home has expanded its range of entertainment choices from just colour TV and radio, to a much more varied environment that may include multiple TV sets, PCs with internet access, mobile phones (with games, text communication and music downloads), MP3 players, gaming consoles, VCRs/PVRs, and multichannel access through SKY, TelstraClear or Freeview.

The composition of New Zealand audiences is also becoming more varied. Whilst ethnic diversity is just one factor in the changing face of New Zealand audiences, it is nonetheless an important one for any mainstream broadcaster trying to provide 'something for everybody'. In 2006, New Zealand's largest ethnic group was of European descent and represented 67.6% of the population followed by Māori at 14.6%. Meanwhile, Asian peoples represented the fastest growing group, increasing from 238,176 people in 2001 to reach 354,552 people in 2006 (an increase of almost 50%), and those identifying with a Pacific people are the second fastest growing group.[7] New Zealand also has a relatively high level of migration with over one in five New Zealanders being born overseas.

The digital challenge to broadcasters and other media providers is clear – the imperative is to continue to provide a range of compelling content but to do so on a variety of platforms, for audiences that increasingly expect more personalised programming – 'what, when and how' they want it. For broadcasters and related industry players, this drive for diversity and imperative to be on all screens can require significant changes to their business models but is not necessarily supported by an increase in revenue streams. Therefore, the range and variety of content available and investment in new technologies in a market the size of New Zealand could be considerably at risk during the digital transition.

The funding agency New Zealand On Air conducts an annual review of local content[8] and observes that the provision of local content can be an important 'point of difference' for broadcasters in an increasingly competitive media environment. The report also observes that whilst local content is spreading across all new channels so far, its levels on the established free-to-air (FTA) channels has remained relatively static.

3.2. Market size and key players

Historically, New Zealand's media and telecommunications markets have been dominated by a number of established players (e.g. TVNZ in FTA TV, SKY in pay-TV or Telecom New Zealand in fixed telecommunications). However, recent developments, such as the growth of internet radio and publishing, the introduction of Freeview and the planned separation of Telecom New Zealand could, over time, lead to significant changes in market structure. Entities which in the past operated in distinct markets may now find

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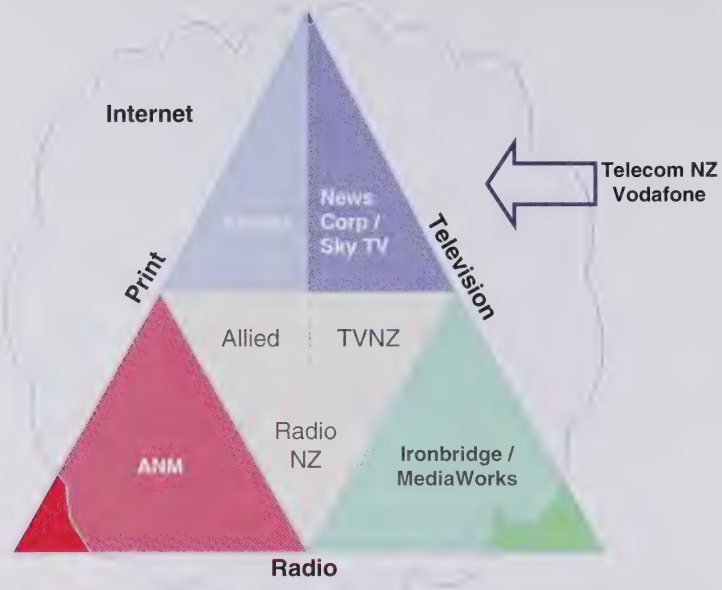
[7] Quick Stats about Culture and Identity, 2006 Census, Statistics New Zealand
[8] Television Local Content Report 2006, NZ On Air, May 2007:
http://www.nzonair.govt.nz/files/about/lc_report_06.pdf

themselves competing against each other, especially in the digital media space, see Exhibit 2.

Exhibit 2: Mapping out the key players in the New Zealand media markets



Source: Spectrum / Value Partners analysis; Bill Rosenberg, *News media ownership in New Zealand*, 15 July 2007

This section provides analysis of a number of leading existing players and outlines potential developments in the competitive market.

Throughout this report, the research and analysis is based around four main 'distribution' platform categories and focuses on the consumer's method of receiving content, whilst recognising that there is overlap between them. These are 'TV', 'Radio', 'Broadband' and 'Mobile'. In this section, we look at the current market environment of each category. For the purposes of this report:

- 'TV' platform describes audio visual content, delivered via closed terrestrial (analogue and digital), satellite, cable and fixed platforms to a TV set and includes VOD and IPTV
- 'Radio' includes content broadcast to traditional radio devices
- 'Broadband' includes all the content which can be accessed online, such as internet radio, Web TV (received via a PC), podcasts or text.
- 'Mobile' describes the content that can be viewed on mobile phones.

Even as it remains possible to distinguish between these platform categories, the content and services being delivered over them is increasingly converged. For example, radio (streamed audio) services can be received via the TV, via 'radio', via the web or via mobile: i.e. across all four platform categories. It is, in part, this service proliferation across platforms that has prompted this regulatory review. Much of today's regulation is based on the assumption that content and platform categories will remain delineated.

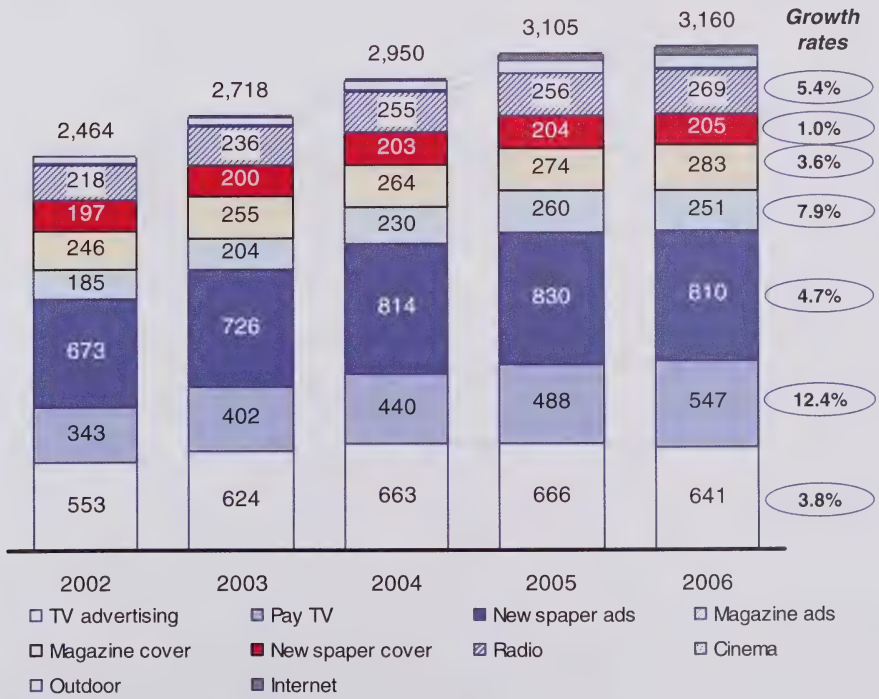
Nevertheless, the platform categories remain a good starting point for understanding today's market structure and how it is evolving.

3.2.1 Market overview

The New Zealand media market was worth NZ$3.2bn in 2006. As highlighted in Exhibit 3 below, the market remains dominated by TV and print, which accounted for 37.6% and 49.0% of the total revenues respectively. Radio accounted for 8.5% of the total revenues, while the contribution from the internet is still relatively low, at 2.1% of the total.

From 2002 to 2006, the media market enjoyed reasonably steady growth, at 6.4% CAGR (Compound Annual Growth Rate), with pay-TV being the strongest area of growth at 12.4% CAGR. Internet revenues have grown strongly in the last three years, from NZ$8m in 2003 to NZ$65m in 2006, but to date the impact of internet on the overall market remains minimal.

Exhibit 3: New Zealand media market (NZ$, million)



Source: Spectrum / Value Partners, Informa, Zenith; NZ Advertising Standards Authority; PWC *Global entertainment media outlook*

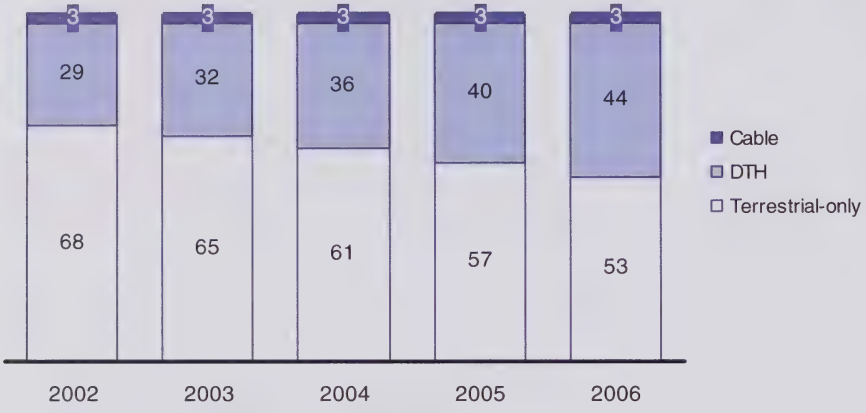
3.2.2 Television

Platforms

Television is one of the most ubiquitous media, with 99% household penetration of TV sets, which is equal to 1,155 thousand households[9].

The majority of TV households in New Zealand (53%) receive TV services via terrestrial analogue receivers only; 44% of the TV households subscribe to satellite services and 3% to cable. In 2002-2006, satellite or Direct-to-Home (DTH) has been the fastest growing platform, at annual growth rate of 11%.

Exhibit 4: Penetration of distribution platforms[10] (% of TV households)



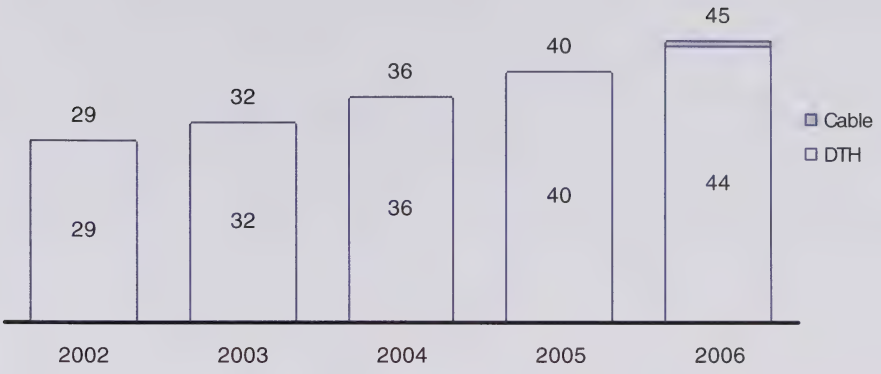
Source: Spectrum / Value Partners, Informa

Digital TV penetration in New Zealand has reached 45%, mostly because of the success of SKY's DTH platform. Since 2005, analogue UHF subscribers have also gradually migrated to digital, but the overall impact on the country's level of digitalisation is minimal (1%). However, digital penetration in New Zealand is expected to grow: earlier in 2007, a consortium of broadcasters launched a digital DTH FTA service branded Freeview with government backing and is planning to launch a Digital Terrestrial Television (DTT) service in 2008 (see below).

[9] Nielsen research

[10] Penetration of each technology, both digital and analogue; Sky's UHF customers are counted as 'terrestrial'

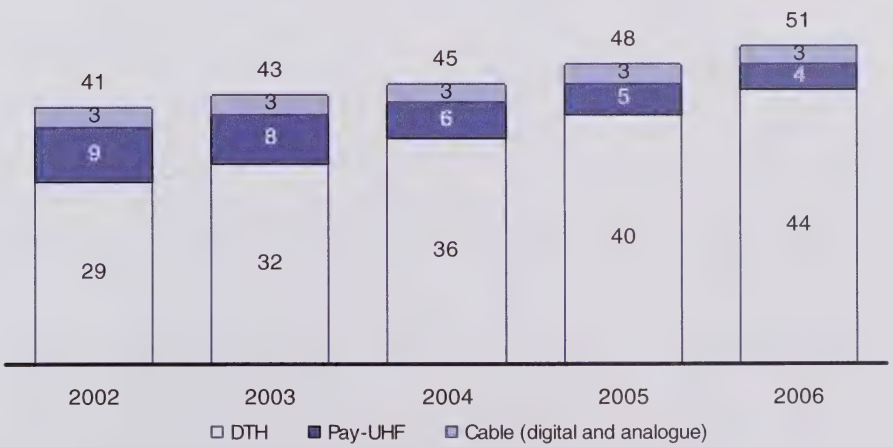
Exhibit 5: Digital penetration by platform (% of TV households)



Source: Spectrum / Value Partners, Informa

The percentage of New Zealand TV households, able to receive only FTA (free-to-air) programming (which is supported by advertising revenue), has been slowly diminishing. By the end of 2006, pay-TV penetration, supported by subscription fees, had reached 51% of TV households, up from 41% in 2002 (5.6% CAGR), with 44% of the households receiving pay-TV via satellite (DTH), 4% via terrestrial receivers and only 3% via digital and analogue cable.

Exhibit 6: Pay-TV penetration by platform (% of TV households)



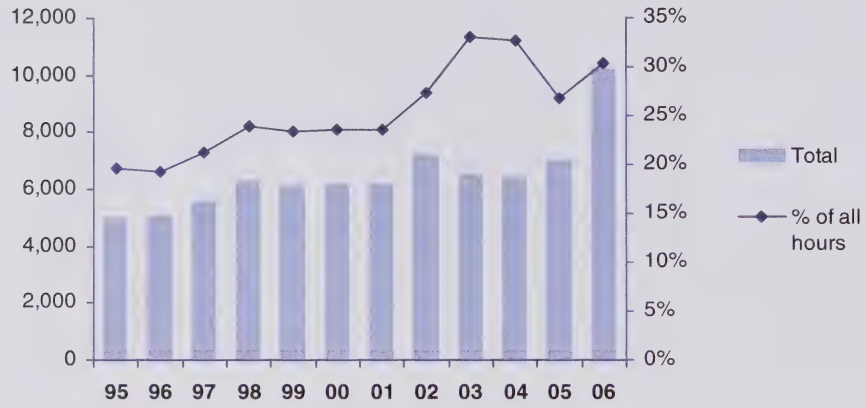
Source: Spectrum / Value Partners, Informa

New Zealand Content Production

Independent production companies ('indies') provide a significant amount of programming to New Zealand broadcasters and content distributors. A total of 597

production companies were operating in New Zealand in 2006, with television programmes contributing just less than 40% of the industry's combined revenue - the majority contributor remains feature and short films[11]. New Zealand's major free-to-air TV networks also have their own production facilities which produce a variety of programming in-house. Until 2005, data on New Zealand's screen industry was collated by the production industry group, SPADA. Survey data on the industry is now collated by Statistics New Zealand, but the following exhibit provides an indication of recent quantitative trends in local content production.

Exhibit 7: Local programming produced in New Zealand (hours)



Source: Spectrum / Value Partners analysis; TV on Air, *Television Local Content Report 2006,* May 2007

News, Current Affairs and Sports programming accounts for a significant share of local content provision on New Zealand television and as a commercially viable staple in the schedules is not generally supported by New Zealand on Air's (NZ On Air) contestable public funding. NZ On Air funding tends to focus on the higher risk genres of local content including drama, children's and documentaries. Contestable funding from NZ On Air contributes funding to 20% of the total local content hours. In terms of the level of investment in new local content, it is worth noting that repeat hours comprised 23% of total local content hours in 2006.

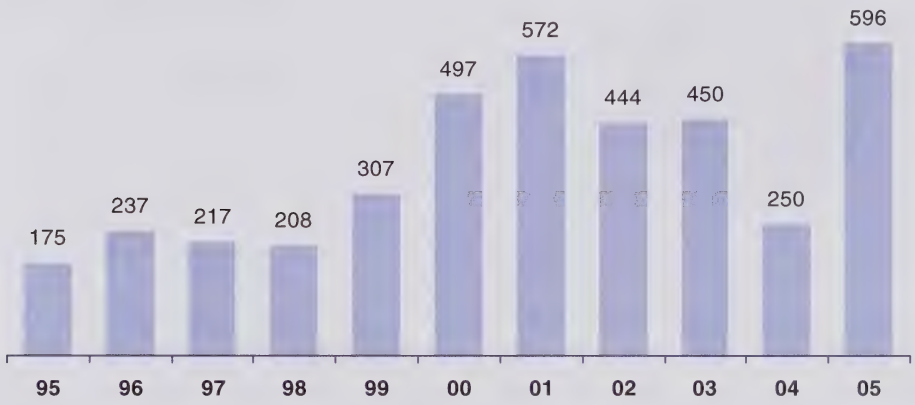
Overseas content therefore plays a vital role in New Zealand's broadcast schedules and content supply market. US studios and other overseas content distributors often sell premium content 'bundled' with programmes that are less in demand at a single price as part of an 'output deal' or programme bundle. International content may therefore be seen to 'crowd out' local content because the acquisition cost of overseas content and programme bundles is usually a fraction of its actual production cost and is considerably cheaper than the cost of commissioning or producing equivalent local content[12].

[11] Screen Industry in New Zealand 2006, Statistics New Zealand
[12] NZ On Air Local Content 2006 Press Release and Rick Ellis, CEO of TVNZ, *Dominion Post,* 24 April 2007

Over the last five to ten years, the New Zealand screen production industry has developed its global position. This has largely been based on the feature film sector, where a number of high profile productions have showcased New Zealand's potential as a centre for film production.

Before 2000, the industry saw a gentle upward trend in investment with no dramatic changes (as highlighted in Exhibit 8[13]). However, production of *Lord Of The Rings* and other international productions more than doubled the average annual level of production financing. The uplift in 2005 was determined by the location of a number of other offshore production projects in New Zealand, notably *King Kong*, and *The Lion, the Witch and the Wardrobe.*

Exhibit 8: Total production financing in New Zealand ($ millions)



Source: Spectrum / Value Partners analysis; SPADA

The New Zealand screen industry is therefore susceptible to significant fluctuations due to changes in both domestic demand and variations in the international film and television industries. In 2006, television broadcasting was the only sector to show an increase, up $66 million to $1,071 million (the screen production industry's total gross revenue was $2,542 million). However, just over 50% of the gross revenue for the industry was received from overseas, with the US as the highest contributor[14].

So whilst the New Zealand screen industry has remained relatively stable over the last year, international and local market volatility make any projections about the market rather difficult. In the years to come, the magnitudes of year to year variations in demand and revenues may increase and, in turn, intensify the difficulties in retaining a critical mass of the core competencies in New Zealand.

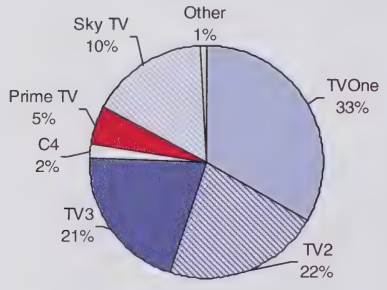
[13] Survey of NZ Screen Production, SPADA, July 2004. The exhibit includes SPADA's estimated figures for the 2005 full year

[14] Statistics New Zealand, Screen Industry Survey, 2006

Key players

The largest broadcaster by audience share is the Public Service Broadcaster (PSB) Television New Zealand (TVNZ), whose two major channels, TVOne and TV2, account for 54.8% of total peak time TV viewing. Other players, also profiled in the section below, are the FTA commercial broadcaster MediaWorks (22.5% viewing share), the pay-TV operator SKY (16.4% of the viewing share for its pay services plus an additional 5.3% for its FTA channel Prime), the PSB Māori Television Service (MTS) and the FTA digital platform service provider Freeview.[15]

Exhibit 9: Viewing shares in Q2 2007 (% of adult audience)



Source: Spectrum analysis, AGB NIELSEN MEDIA RESEARCH, 2007

Television New Zealand

Television New Zealand (TVNZ) is a Crown Company established under its own Act that functions as a public free-to-air broadcaster. Of its two nationwide channels, branded TVOne and TV2, TVOne offers a broader range of programme genres, and includes 54% New Zealand produced content (TVNZ, 2006)[16]. TV2 is complementary to TVOne, and is generally targeted at a younger audience. The two channels combined included 37.8% of local content during peak time (TVNZ Annual Report, 2006). Both channels are carried unencrypted on SKY, Freeview and are broadcast FTA on VHF analogue licences. On 30 September 2007, TVNZ launched the first of two new advertising-free digital services: TVNZ6 is broadcasting on the Freeview platform. Its three services are *Kidzone* (for pre-schoolers), *Family* and *Showcase*.

Approximately 8% of TVNZ's revenue is derived from government grants. In 2006/07, TVNZ received $15.1 m direct funding towards fulfilling Charter obligations, $1.1 m for transmission to remote localities, $0.6 m for Pacific transmission plus $5.2 m for digital services. In addition, TVNZ has benefited from an average annual contestable funding allocation of $47.6m from NZ On Air, constituting 72% of NZ On Air's funding for broadcasters. Of this average, approximately 10% is for in-house production, however, while the remainder goes to independent production houses.

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[15] AGB Nielsen Media Research: Dataline Service, Quarter 2, May 2007
[16] TVNZ Annual Report 2006

MediaWorks

Formerly a subsidiary of Canwest Global Communications Ltd, MediaWorks is now owned by HT Media, a subsidiary of the Australian Ironbridge Capital equity investment group.

MediaWorks offers two nationwide channels, TV3 and C4. TV3 is a broad-based general entertainment service, while C4 is mainly a music channel targeting a younger audience. TV3 screened 21% local content in 2006.

TV3 attracted 28% of NZ On Air's available contestable funding in 2006. This funding supports programming produced by independent production companies rather than MediaWorks' in-house production.

SKY Network Television

SKY is part-owned by News Corporation, and is the primary provider of pay-TV services in most New Zealand regions. Via satellite, it offers 80 subscription and 15 pay-per-view channels. SKY recently acquired Prime TV, an established commercial FTA TV broadcaster with a peak audience share of 5.3% at Q2 2007. SKY's peak audience share across all channels, including Prime TV, is reported to be 21.7% at Q2 2007 (see the Exhibit above). The SKY DTH service is transmitted digitally to approximately 490,000 subscriber households, at a monthly cost of $47.73 for the basic package.

A rented proprietary set-top-box (STB) and satellite dish are required to receive and decode the digital satellite signal. MySky STBs also offer 'personal video-recording' (PVR) for an additional up-front fee. A range of SKY services is wholesaled to the TelstraClear cable service and a limited number are available via terrestrial UHF transmission.

The SKY network offers a range of channels across all genres, with its basic subscription including the major FTA channels. Various special interest packages are offered for an additional monthly fee (cinema, documentary, sport, life-style, arts, etc), and streamed services to Vodafone mobiles are also available.

Māori Television Service

The Māori Television Service (MTS) was established by its own Act in 2003. Peak audience share is less than 1% (Nielsen), but the number of viewers is growing rapidly and includes a significant number of non-Māori (MTS Annual Report, 2006).

MTS programming is primarily in the Māori language, is based upon the Māori culture, and covers all genres. Most content is in te reo Māori, about Māori or of specific interest to Māori. Currently, it broadcasts for an average 8 hours a day.

MTS is a developing service with an important public broadcasting function and as such is 95% publicly funded through direct government (through Te Puni Kōkiri [TPK]) and contestable funds (through Te Māngai Pāho [TMP]). In the 2006 financial year, Te Puni Kōkiri provided funding for MTS operations totalling $11.5 million, while TMP provided

direct funding of $16.1 million to MTS for the production of in-house programming, and a further $19.3 million worth of programmes commissioned from independent producers through the contestable fund. In 2006, MTS screened 75% local content.

MTS owns a management right allocated by the Crown in the UHF-TV band but does not currently use it. For technical reasons related to reception in an adjacent licence, an arrangement was negotiated whereby MTS could use one of Sky's licence sets and secure 100% transmission coverage across New Zealand.

Freeview

Freeview Ltd is a consortium of free-to-air television and radio broadcasters, whose collective purpose is to implement FTA digital broadcasting in New Zealand.

Freeview is available on DTH via the Optus D1 satellite platform across New Zealand, and will also be available from early 2008 via three digital terrestrial television (DTT) multiplexes operated by Kordia, MediaWorks and TVNZ. MPEG4 has been selected as the compression standard for DTT as this will support high definition television (HDTV) as well as multi-channelling.

The satellite Freeview service currently carries digital simulcast channels from TVNZ, MediaWorks and MTS (totalling five channels), and Radio New Zealand (two channels). TVNZ has announced two advertising-free channels, TVNZ 6 and TVNZ 7, supported by $79m funding over six years from the government. Triangle Stratos Television and a second Māori Television Service (MTS) channel are also due to join the Freeview platform. Transponder space for a further thirteen channels remains available on the Optus D1 satellite and members of the consortium have stated intentions to provide more television channels in the future.

Other broadcasters

A number of smaller regional and community channels operate in New Zealand. The New Zealand Regional Television Broadcasting Group (RTB) represents the common interests of these stations (which may operate under commercial or non-commercial licences).

Since a specific allocation from government in 2005, NZ On Air has been able to offer funding to regional broadcasters on a contestable basis. The RTB reported that in 2006 its members screened 24,971 hours of 'locally provided' programmes[17] and 'locally produced' programmes, some of which are New Zealand made programmes funded by NZ On Air.

Many of the regional broadcasters utilise terrestrial transmission networks, but some are carried encrypted on SKY or via their own local transmitter sites.

[17] A "locally provided" programme is one that is purchased from overseas by a local community group, which then purchases broadcast time from the local channel

3.2.3 Radio

While penetration of the 'radio-only' devices in New Zealand has only reached 69% of households[18], radio programmes are often received via a number of other devices, such as MP3 players, computers or TV sets. Radio is also in almost 100% of cars and 'drive-time' represents the commercially lucrative period for commercial radio. In addition, radio services are bundled with TV and are delivered over the same platforms (e.g., Freeview, DTH and cable).[19]

Radio generally has a distinct format from television broadcasting: it is anchored in local programming and therefore has a high proportion of local content. Even where content is overseas sourced (e.g., recorded music, drama or comedy), a local studio normally provides programme continuity, as well as regular material (news, weather, sports commentary, talk-back, etc).

The major radio broadcasters are the publicly funded, commercial-free, Radio New Zealand and two large commercial networks, The Radio Network (TRN) and RadioWorks (a part of the MediaWorks group of companies). These commercial networks operate bundles of station brands across the country, who cumulatively account for the bulk of radio advertising revenues.

There are a diminishing number of independent commercial stations[20] and some small non-commercial networks, serving local and regional audiences. Community, access and special interest stations (including Iwi, Pacific and student radio) are supported by a variety of means including public funding, sponsorship, donations and/or local trusts. The government is also creating a number of new FM radio broadcasting licences, commercial and non-commercial, specifically restricted to local and community ownership and operation.

Radio New Zealand

Radio New Zealand (RNZ) is a Crown company operating on AM and FM platforms, and is available via satellite on the Freeview and SKY networks. It is the national public radio broadcaster. Its two nationwide channels are branded RNZ National and RNZ Concert. In the 2006 audience survey results, the two stations combined were listened to live by approximately one in five people in an average week and RNZ National was the number two station in terms of station share nationwide [21].

RNZ National offers a range of genres, largely produced in-house and with a New Zealand focus. A significant proportion of airtime is devoted to news and current affairs. Selected programmes can be downloaded (podcast) from the internet. RNZ Concert provides primarily a music service, with a focus on classical and New Zealand music.

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[18] Zenith, AsiaPacific Media Markets, 2006.

[19] National 101, Concert FM, NiuFM, two music channels, one religious

[20] Government allocated a number of FM frequencies in 2007 for local and community radio, commercial and non-commercial, with conditions of eligibility, content and implementation.

[21] Research International survey for RNZ, surveys listeners aged 15 years old +, September 2006.

Most of Radio New Zealand's funding (approximately $28 million of a total budget of $33.5 million) comes from the Crown via NZ On Air, with an additional $1.9 million of direct funding for Radio New Zealand International from the Ministry for Culture and Heritage. The balance comes from other revenues.

Other public radio broadcasting

The government also provides funding to several further radio services:

- Māori content and operational support to 21 iwi radio stations, funded through the funding agency Te Māngai Pāho (TMP);
- Pacific Island content through the National Pacific Radio Trust (NPRT) and Access radio;
- Access and student radio broadcasting, New Zealand music content on radio, and other New Zealand radio programmes on commercial radio all through NZ On Air; and,
- Services to the Pacific via Radio New Zealand International through direct funding from the Ministry for Culture and Heritage.

These services are available variously through AM, FM, satellite and internet channels. Radio spectrum is reserved for 'public interest' broadcasting and licences are assigned on non-commercial terms by the Ministry of Economic Development on advice from the Ministry for Culture and Heritage or Te Puni Kōkiri.

In 2006, NZ On Air funding for access and special interest community radio totalled $2.3m with a further $820,000 provided for New Zealand content (other than music) on commercial radio.

MediaWorks

The RadioWorks network is a division of MediaWorks, recently acquired from CanWest by Australia's HT Media. It operates a nationwide chain of branded commercial AM and FM radio stations (KiwiFM, The RockFM, MoreFM, etc) with predominantly central feed and some local content. Radio Live is the network news channel. The network owns and operates approximately one-third of all AM and FM radio broadcasting licences.

Overall, the RadioWorks network offers a range of genres, but with an emphasis on commercially viable programming with mass audience appeal: hence, there is a predominance of popular music and talkback, tailored to particular target audiences.

The Radio Network (TRN)

TRN purchased Radio New Zealand's commercial network (ZB and ZM stations), which was privatised in the early 1990s. TRN is an Australian-owned company operating, like MediaWorks, a national network of branded commercial AM and FM radio stations (Classic Hits, Newstalk, etc) with predominantly central feed plus some local content. TRN owns and operates approximately one-third of all AM and FM radio broadcasting licences

3.2.4 Telecommunications

Role of telecommunications in the media market

'Telecommunications' is defined for the purposes of this review as all means of electronic delivery of audio-visual content other than broadcast (which includes cable TV, which is dealt with in the Television section) and personal and interpersonal communications (e.g., voice telephony and email).

Historically, telecommunication services providers operated a range of (service specific) networks including the PSTN (for telephony), ATM and Frame Relay networks for business data and more recently mobile networks.

These are now being replaced, however, by a single, IP-based core network infrastructure able to support multiple services (voice, video, data, fax) and multiple access networks (PSTN, DSL, HFC, 2G, 3G, WiMAX, fibre, etc.)

At the same time, core and access network capacities have both been increasing dramatically, allowing a greater range of services to be offered to residential customers beyond voice, fax and 'dial up' data.

The broadband 'revolution' is being driven by:

- set-top box technology (eg, content on demand)
- access networks capable of high bandwidth content (eg, triple-play)
- centralised IT applications (eg, on-line archives and back catalogues)

These drivers have already brought some service convergence, with voice increasingly being carried over 'data' services (hence 'voice over IP' or 'VoIP') and broadcasting-like content being downloaded and streamed via the internet.

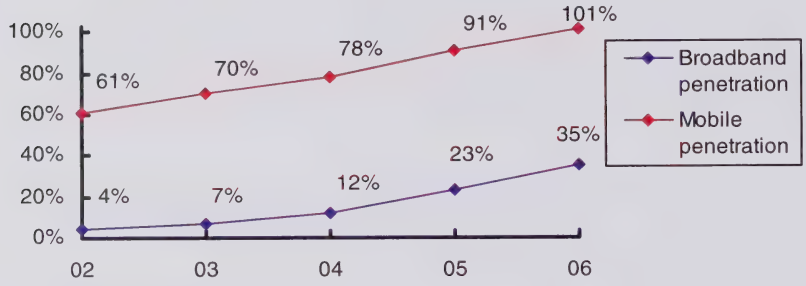
The broadband 'revolution' has already brought some service convergence, with voice increasingly being carried over 'data' services (hence 'voice over internet protocol' or 'VoIP') and broadcasting-like content being downloaded and streamed via the internet. This process of service convergence is likely to continue as broadband speeds increase. In fact, internet delivered audio (downloads to MP3 players and streamed content to PCs, HiFis and portable devices) is rapidly proliferating worldwide and is becoming established in New Zealand.

Platform penetration

Broadband penetration in New Zealand reached 35% of households in 2006 with the market adding 191,000 net new fixed line broadband users during the year.

As in other developed markets overseas, the New Zealand mobile market is reaching a level of saturation, with mobile penetration of 101% and 4.1m subscribers in 2006. 3G services are fully operational in New Zealand, with the two major players, Vodafone and Telecom New Zealand (TCNZ), both providing video streaming services.

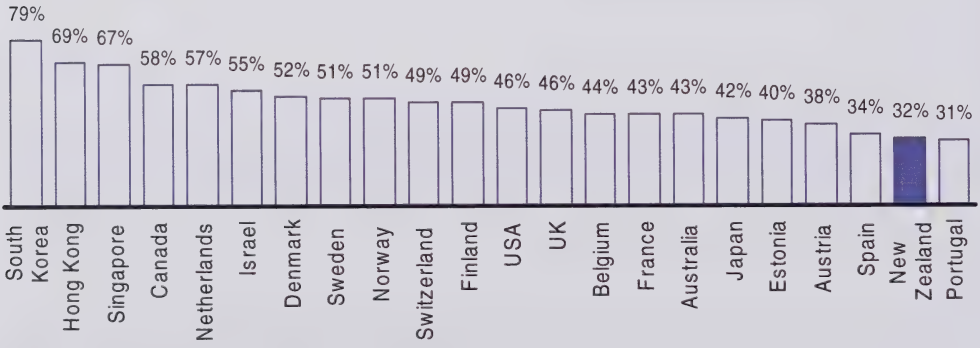
Exhibit 10: Penetration of broadband (% of households) and mobile (% of population)



Source: Spectrum / Value Partners analysis, ScreenDigest; Yankee

A number of the other world markets are, however, currently ahead of New Zealand in terms of the level of broadband penetration.

Exhibit 11: Level of broadband penetration in 2006 (% of households)



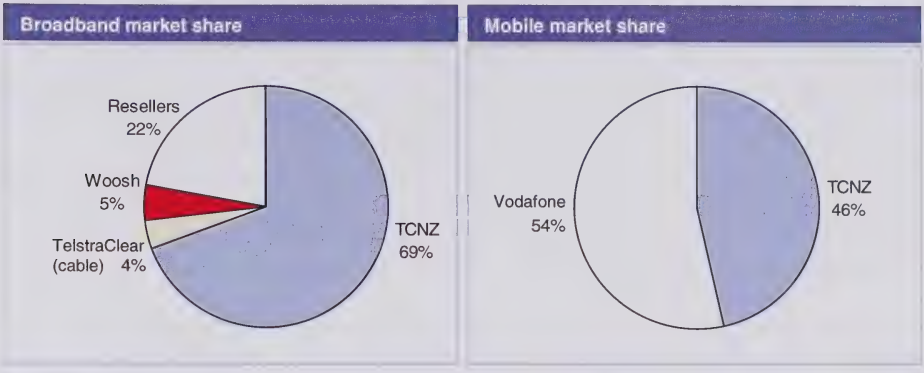
Source: Spectrum / Value Partners analysis; ScreenDigest

Key players

Incumbent carrier Telecom New Zealand (Telecom NZ) leads the broadband market with 395,000 retail broadband customers in 2006, which account for 69% of the total market.

The mobile market in New Zealand is dominated by two players, with Vodafone and Telecom NZ accounting for 54% and 46% of market respectively in 2006. Originally the leading player in the mobile market, Telecom NZ lost its position to Vodafone in 2003.

Exhibit 12: Broadband and mobile market share (% of subscribers), 2006



Source: Spectrum / Value Partners analysis, Yankee Group, Informa

Telecom New Zealand

From its origins in the New Zealand Post Office, Telecom NZ has grown into one of this country's leading commercial entities. At its creation in 1987 it purchased, for $3.2 million, the national copper wire network and became the operator of the only full service network in New Zealand. This network has subsequently been made available to competing service providers on a wholesale basis through the 2006 Telecommunications Act Amendment and Local Loop Unbundling (LLU), although disputes over access persist as a feature of the market.

Telecom currently offers wireline and wireless telephony, and is an Internet Service Provider (ISP) under the market leader Xtra brand. Telecom offers cellular telephony services and, more recently, a mobile internet provision. Telecom's cellular network originally employed CDMA radio access technology and so its handsets could not roam onto most of the world's networks, which are GSM based. However, the inclusion of GSM radio access technology (in the form of WCDMA), which is compatible with many overseas networks, is currently under way.

Telecom NZ is actively investigating IPTV, and has previously publicly stated plans to establish a service based on a hybrid set-top box (STB) in partnership with a digital TV platform, such as Freeview or SKY. However, a firm launch date has yet to be established and such a service is likely to require more capital investment in the current infrastructure.

Finally, Telecom NZ's mobile content service aggregates content ranging from news and weather to rugby highlights, and is available in short-form video clips.

TelstraClear

TelstraClear was formed through the mergers of several smaller competitive carriers and is the largest fixed line competitor to Telecom and the only cable TV operator in the market. The Australian incumbent, Telstra, came into the New Zealand market in 1996 and merged with the cable television company Saturn Communications in 2000. Later, in 2001, Telstra also acquired CLEAR Communications, to become 'TelstraClear'.

Over its fibre-optic cable networks, TelstraClear became New Zealand's first 'triple-play' provider to 40,000 residential customers in the Wellington and Christchurch areas, offering telephony, broadband internet and digital TV. In other areas, Telstra's telephony and internet services are distributed nationally over a fibre backhaul network, and locally over Telecom copper (and leased lines). As a broadband player, TelstraClear owns the paradise.net and clear.net ISPs.

TelstraClear has been able to rebroadcast free-to-air television channels without a requirement to negotiate a licence agreement with broadcasters, under s88 of the Copyright Act 1994[22]. Separately, TelstraClear's cable platform has negotiated to broadcast a range of SKY's pay-TV content.

Vodafone

Based on a limited cellular network established by Bell South, and acquired in 1998, Vodafone has become New Zealand's largest cellular telephony service provider and the only competitor to Telecom in the mobile market. It utilises GSM radio access technology compatible with the majority of mobile networks overseas.

In 2005 Vodafone launched a new 3G network, employing the WCDMA technology now becoming widespread in the European Union (EU). With this network, Vodafone can offer more bandwidth-intensive services such as video telephony, GPS, and music and internet downloads.

Vodafone launched its initially free T3G Video Clip service in April 2005, generating over a million streams in the first four months. The service has evolved to offer video clips of up to 15 minutes in length, from a maximum of three minutes at launch, over a variety of channels. Content providers include TVNZ, Sky TV, Juice TV, E! Entertainment and Gamer.TV.

In early 2007, Vodafone launched SKY mobile TV service for 3G handsets. The service features eight channels, some live and some edited for mobile, including Sky Sports News, Sky News, Sky Movies, CNN, MTV, E!, Cartoon Network and Discovery.

Vodafone purchased the ISP ihug in 2006, which offers a fixed line alternative service to Telecom. This fits with Vodafone's evolving global strategy of offering both fixed and mobile services.

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[22] The objective of s88 was to encourage the deployment of cable services, which has not occurred beyond Wellington and Christchurch. The section is under review as part of wider amendments to the Copyright Act.

Other significant telecommunication players

Kordia, the former transmission arm of TVNZ, is now wholly-owned subsidiary of a state-owned enterprise and provides transmission and linking services to the broadcasting and telecommunications industries. It is, notably, a wholesale only operator.

Vector is similar to Kordia as a wholesale only operator and operates a multi-infrastructure network. Its open-access fibre-optic network only operates in metropolitan areas, primarily Auckland and Wellington.

For the six months ending 31 March 2007, there were 57 ISPs operating in New Zealand[23], which operate through the Telecom, TelstraClear and Vodafone networks. Some local and regional development of wireless ISP services is beginning, and international VoIP services (e.g. Skype) are available through any standard internet connection.

Orcon (recently acquired by Kordia) and others are planning ADSL networks running on Telecom wirelines.

NZWireless, CallPlus, Natcom and Woosh Wireless are deploying, or planning to deploy, wireless broadband services in the 2.1, 2.3 and 3.5 GHz spectrum bands. To date these services offer limited local coverage and bandwidth. Most have stated an intention to offer double-play or triple-play services with national coverage.

There are increasing numbers of local and regional services supplying (or intending to supply) broadband coverage using wireline, wireless or hybrid platforms: e.g. Vector and Compass Communications (mainly Auckland), Airnet (East Coast) and The Pacific Net (Nelson).

3.2.5 Print

Role of the press in the digital media market

New Zealand has a high number of daily newspapers in relation to population, with 24 regional daily papers (but no national paper), Newspapers in New Zealand are no longer restricted to print versions alone. In order to maintain their relevance and 'readership' in a digital age, the printed press is developing online versions, which may include audio-visual content and compete directly with other video-based news sources including broadcasters.

Newspapers also provide an alternative source of news and current affairs within the wider media ecology of New Zealand. This is particularly valuable in reflecting local and regional news.

[23] Statistics New Zealand, Internet Service Provider Survey, March 2007

Key players

New Zealand's press media is dominated by two major players, John Fairfax Holdings Ltd (Fairfax media) and APN News and Media (ANM). These two interests own 87.2% of the daily press circulation of provincial newspapers and 92.1% of the metropolitan readership and are both Australian companies.

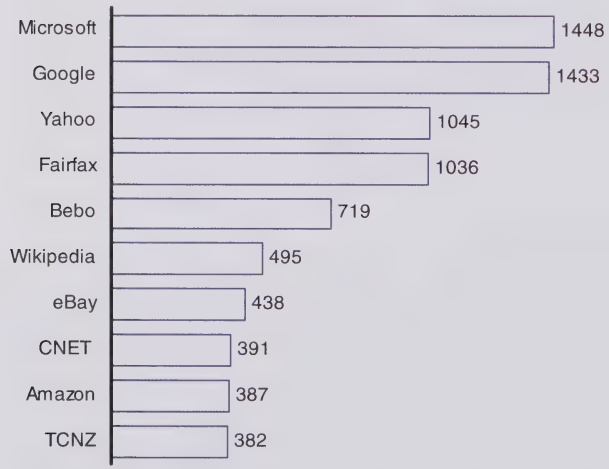
Both companies have interests in other sections of New Zealand media. Fairfax media also owns Trademe.co.nz, the highly successful online auction site, which has been consistently in New Zealand's top five websites since its launch. ANM owns the New Zealand Radio Network.

3.2.6 Digital media players

As in the other countries across the world, a number of major players in New Zealand broadcasting and telecommunications market are acquiring or developing new digital assets, with the print players Fairfax and APN leading the trend.

The clear leaders in the online world are, however, the three large international (US based) players, Microsoft, Google and Yahoo!, who already have an established position in the internet sector (see Exhibit 13 below):

Exhibit 13: Top ten online properties in New Zealand (by the number of unique visitors, 000s)

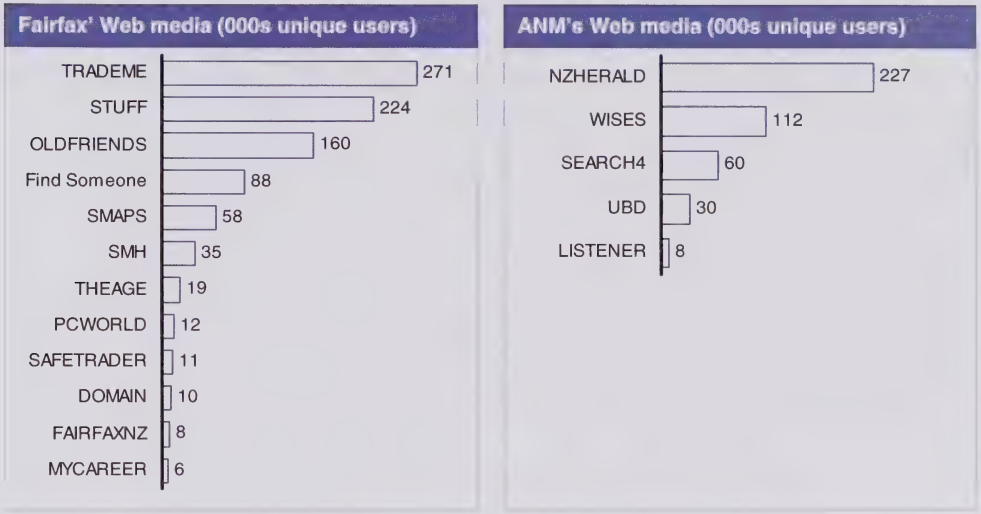


Source: Spectrum / Value Partners analysis; Comscore

Initially, the local New Zealand media companies started websites largely as an alternative outlet for their conventional material (whether print, radio or television). However, these entities are now rapidly gaining importance: both Fairfax and the New Zealand Herald release news reports on their websites before it appears in their print media, while TVNZ is anticipating income from reselling some of its broadcast programmes through its TVNZ on-demand internet service.

Simultaneously, media players are also expanding into new commercial online ventures, using websites as portals to attract new customers. Fairfax acquired one of New Zealand's most successful internet ventures in March 2006 when it bought Trademe.co.nz and associated sites, while ANM has entered the online trading world, acquiring 50% of the classifieds website finda.co.nz in October 2006. Jointly, Fairfax's websites are the third most visited online property in New Zealand, while ANM sites are at number 14, with 361,000 unique visitors between them.

Exhibit 14: Web properties of Fairfax and ANM



Source: Spectrum / Value Partners analysis; Comscore

Telecom New Zealand, with 382,000 unique users, visiting its sites, is the tenth most popular web asset in the New Zealand market (see the first Exhibit in the section). Its own portal, Telecom.co.nz, is the most popular asset and attracts 243,000 unique users, followed by its online shopping property Ferrit.co.nz with 175,000 users and an interactive multimedia portal Clevertoys.co.nz with 25,000 users.

TVNZ's own portal attracts 253,000 unique users; the site supports the two main TV channels of TVNZ and, in addition, features dedicated sport and weather sites. In comparison to the core portal, its newly-launched TVNZondemand.co.nz is less popular, with only 70,000 unique users, but this amount is increasing. The portal offers catch-up TV and other TVNZ's popular content, including the broadcasters' popular shows from archives, weekly compilations of show highlights, or preview highlights. It includes some free content but also offers pay-per-view content, where the audience can pre-pay credit of $10 to $100, which can be used to purchase selected shows.

4 Overview of the current regulatory system

The New Zealand media regulatory landscape is relatively fragmented, with a number of regulatory bodies governing various aspects of the market through a range of legislative Acts and regulatory initiatives.

4.1 Bodies and responsibilities

Unlike many European nations, which have a single national regulatory authority for communications issues, New Zealand's telecommunications and media sectors are regulated through a range of legacy legislative provisions and by a variety of agencies, the most relevant of which are described below.

4.1.1 Ministry of Economic Development (MED)

MED is the lead policy agency for radiocommunications, telecommunications and competition issues. Its Business Services Branch includes Radio Spectrum Management, which issues and monitors radio licences. Communications policy and planning are managed by the Energy and Communications Branch's Radio Spectrum Policy and Planning (RSPP) group for radiocommunications and Information, Technology and Telecommunications (ITT) group for telecommunications. Both policy groups report to the Minister of Communications.

Licensing

Spectrum licences for Radio New Zealand and other 'public interest' broadcasters are assigned by MED on advice from the Ministry for Culture and Heritage (MCH) and Te Puni Kōkiri (TPK). Spectrum is specifically set aside by the Crown for these and other 'public interest' purposes, including, for example, defence, emergency services, science and community radio.

The current spectrum management rights regime has the following key characteristics with regard to broadcasting:

- commercial licences are generally allocated as property rights by a competitive process for a period of 20 years or until the relevant management right expires within that period,
- licences are assets for accounting purpose and can be leased or traded in secondary markets, and
- licences in use can be renewed on expiry, at a market value calculated by a Cabinet-approved formula, subject to a case-by-case review five years (nominally) before expiry.

Spectrum licences for UHF-TV were renewed in 2005 for the period 2010 to 2020. A policy agreed by Cabinet in 2003 allows analogue licences to be converted to digital at any time, subject to their being in use and to re-valuation. VHF-TV licences will expire in 2015, but the spectrum will be returned to the Crown after analogue switch-off (ASO), whether that is before or after 2015. AM and FM radio broadcasting licences are being renewed currently.

4.1.2 Ministry for Culture and Heritage (MCH)

MCH, reporting to the Minister of Broadcasting, is the lead policy agency for broadcasting and film, as part of its wider responsibility for arts, culture and heritage. It provides advice to government on public broadcasting issues and to MED on spectrum allocation and licensing for public broadcasting purposes.

MCH funds and supports the following agencies.

The Broadcasting Commission (known as NZ On Air)

NZ On Air provides funding to support broadcast content reflecting New Zealand and New Zealand interests, Māori language and culture, and the needs of minority and special interest groups. Its current budget is approximately $100 million. Most television funding is directed to production houses for specific projects. Broadcasters pay a licence fee, nominally based on the cost of acquiring equivalent overseas material, for the use of the resulting content.

In 2006, NZ On Air television funding was distributed as detailed in Exhibit 15 below.[24]

Exhibit 15: NZ On Air funding distribution (2006)

Total distribution of funding		Distribution by broadcaster		By programmes (% of hours)	
• Independent producers:	84.9%	• TVNZ:	65.2%	• Children, young persons:	51.2%
• TVNZ:	14.9%	• TV3:	30.0%	• Special interest:	26.1%
• TV3:	0.2%	• Prime TV:	3.1%	• Documentaries, information, innovation:	13.4%
		• Regional TV:	1.2%		
		• MTS:	0.5%	• Drama, comedy:	9.2%

Other funding went to support the broadcast of New Zealand music, public service radio broadcasting (including Radio NZ, student, access and community radio), and funding to support archiving of broadcast content.

NZ On Air Board Members are appointed by the Minister of Broadcasting.

[24] New Zealand On Air, *Annual report,* 2006

The Broadcasting Standards Authority (BSA)

The BSA assesses complaints against broadcast content where the complainant is not satisfied with the broadcaster's own response, advises broadcasters on standards, codes of practice and ethical conduct, and from time to time publishes codes of practice. Broadcasters are responsible for developing codes, which the BSA then approves after consulting relevant people and organisations.

There are currently four codes. They cover free-to-air television, Pay television, Radio and Election Programmes.

Each Code has a series of standards (TV) or principles (radio) which are supported by guidelines. The standards and principles are based around:

a) The observance of good taste and decency;

b) The maintenance of law and order;

c) The privacy of the individual;

d) The principle that when controversial issues of public importance are discussed, reasonable efforts are made, or reasonable opportunities are given, to present significant points of view, either in the same programme or in other programmes within the period of current interest;

e) Any approved Code of Broadcasting Practice applied to programmes.

Source: Free-to-air Television Code, BSA website, 17 July 2007

The BSA reviews the codes around every five years or more often if required. Information is made available on their website when a draft code has been issued for public comment.

BSA Board Members are appointed by the Governor-General on advice from the Minister of Broadcasting.

TVNZ

MCH directly funds TVNZ to assist with a number of functions, although the large majority of TVNZ's income is from advertising and other revenue ($380 million in 2005/06).

In 2006/07 MCH funded TVNZ $15.1 million to assist in the implementation of its statutory Charter (this is referred to as direct government funding). MCH funded TVNZ $0.509 million to assist with its transmission services to a number of Pacific Islands. TVNZ also received $1.15 million from MCH in 2006/07 to assist with maintaining transmission services to non-commercial (remote) locations throughout New Zealand. Funding for all three of these functions is ongoing.

In addition, in November 2006, the government announced that TVNZ will receive $79 million of funding over the next six years for two new digital channels.

TVNZ is also eligible to apply for contestable funding from NZ On Air and Te Reo Whakapuaki Irirangi (Te Māngai Pāho), the Maori broadcasting funding agency (see below).

As shareholding Ministers, the Minister of Finance and the Minister of Broadcasting jointly hold responsibility for appointments to the TVNZ Board.

4.1.3 Te Puni Kōkiri (TPK)

TPK is the lead policy agency for issues relating to Māori development. It provides advice to government on Māori broadcasting and telecommunications issues, and to the MED on spectrum allocation and licensing, to support objectives through broadcasting for Māori language and culture. It reports to the Minister for Māori Affairs. TPK funds Te Reo Whakapuaki Iriangi (Te Māngai Pāho), the Māori broadcasting funding agency.

Te Reo Whakapuaki Irirangi (known as Te Māngai Pāho [TMP])

TMP, funded by TPK, has similar functions to NZ On Air in relation to the promotion of Māori language and culture. In 2005/06, TMP allocated,

- $40.774 million on television, which includes $5.2 million on Māori language programmes for TVNZ);
- $9.2 million on radio, which includes $6.7 million for iwi radio stations.

4.1.4 Commerce Commission

The Commerce Commission is New Zealand's primary competition regulatory agency and was established under section 8 of the Commerce Act 1986.The Commission is an independent Crown entity and is not subject to direction from the government in carrying out its enforcement and regulatory control activities.

The Commission's purpose is to promote dynamic and responsive markets so that New Zealanders benefit from competitive prices, better quality and greater choice.

Underpinning the Commission's purpose are three strategic goals. They are that:

- Markets are dynamic and all goods and services are provided at competitive prices;
- Consumers are confident of the accuracy of information they receive when making choices; and
- Regulated industries are constrained from earning excess profits, face incentives to invest appropriately and share efficiency gains with consumers.

Since 2001, a Telecommunications Commissioner position was established within the Commerce Commission with responsibility for:

- Resolving the terms and conditions of access to regulated services;
- Recommending regulation of new services or changes to the scope of existing regulation;
- Administering, costing and enforcement of 'telecommunications services obligations' (TSOs)

The Governor-General, on the recommendation of the Minister of Commerce, appoints Commission Members and the Telecommunications Commissioner (who is a member of the Commission) is appointed by the Governor-General on the recommendation of the Minister of Communications.

The Minister of Telecommunications may reject recommendations from the Telecommunications Commissioner (a power which is not generally in line with international regulatory best practice).

4.1.5 Other Agencies

Other agencies with a responsibility, statutory or otherwise, for communications regulation include:

- **Office of Film and Literature Classification**, the government body responsible for classifying publications that may need to be restricted or banned,
- **Department of Internal Affairs**, responsible for censorship law and internet safety, and
- **Advertising Standards Authority**, the **New Zealand Press Council**, **Internet New Zealand** and similar industry consortia administering self-regulatory regimes based on codes of practice.

4.2 Current legislative environment

There are a number of Acts in New Zealand, which cover matters relating to each stage of the broadcasting value chain - content, distribution and networks. This section outlines the broad purpose of relevant Acts.

Legislation specifically pertaining to radio and television broadcasting tends to focus on issues at the content stage, which may be regulated for a variety of policy and administrative reasons. This includes:

- to maintain standards (e.g. section 4(1) of the Broadcasting Act 1989),
- to meet statutory requirements (e.g. Treaty of Waitangi obligations),
- to provide for specific audiences (e.g. section 7 of the Radio New Zealand Act 1995), and

- to encourage and support the provision of local content (e.g. section 36 of the Broadcasting Act 1989).

Generic competition law and fair trading law provisions in the Commerce Act 1986 and the Fair trading Act 1986 apply as relevant to broadcasting and telecommunications markets.

4.2.1 Broadcasting Act 1989

This Act is principally administered by MCH. The Act provided for the maintenance of broadcasting standards, codes of practice and complaints procedures and established the Broadcasting Standards Authority (BSA). The Act also reduced restrictions on advertising hours.

The Act also sets out the principle that content should have regard to national identity and cultural diversity, and established the contestable funding agency the Broadcasting Commission (branded as NZ On Air) to fund New Zealand content, transmission to remote areas and content archiving. An amendment to the Act in 1994 also established Te Reo Whakapuaki Irirangi (Te Māngai Pāho) to fund content that promotes Māori language and culture.

There have been various amendments to the original Act, those most notable include the 1991 Amendment to remove foreign ownership restrictions and the abolition of the Broadcasting (receiver) Fee in 1999.

4.2.2 Radio New Zealand Act 1995

The Radio New Zealand Act is administered by MCH and the Crown Company Monitoring Advisory Unit (CCMAU, which monitors financial performance on behalf of Radio New Zealand's shareholding Ministers). The Act established Radio New Zealand as a Crown company (Crown entity company by later amendment), and removed its commercial arm (ZB and ZM stations, most of which were sold to TRN).

The Act defined Radio New Zealand's Charter, which sets out obligations of content, quality and service, and includes provision for the Radio New Zealand International service(RNZI), which broadcasts to, and provides programme material for, neighbouring Pacific Island nations.

4.2.3 Television New Zealand Act 2003

The TVNZ Act is administered by MCH and CCMAU, on behalf of its shareholding Ministers. The Act established TVNZ as a Crown entity company 'owned' by shareholding Ministers, as it was previously a State-owned Enterprise (SOE). TVNZ is therefore also subject to the Crown Entities Act 2004 (as summarised below) which requires TVNZ to provide a Statement of Intent with a range of financial and non-financial performance information on a three-year cycle. The SOI is monitored by MCH and CCMAU and includes expectations on dividends to shareholders (i.e. the government). In 2008 the expected dividend is 70 % of net profit after tax.

The TVNZ Act also defined TVNZ's Charter requirement of functioning as a public broadcaster, with obligations of content, quality and service similar in intent and wording to the Radio New Zealand Act. The Act also effected the separation of TVNZ's transmission and TV services. Its transmission services are now operated by Kordia, as a wholly-owned subsidiary of a state-owned enterprise.

4.2.4 Māori Television Service Act 2003

This Act established the Māori Television Service (MTS) as a Statutory Corporation. The Act also established Te Putahi Paoho as an electoral college and advisory body to MTS, with representation on its Board.

MTS therefore has two stakeholders: the Crown – through the Minister of Māori Affairs (Hon Parekura Horomia) and the Minister of Finance (Hon Michael Cullen) – which appoints three members of the MTS board, and Te Putahi Paoho (the Māori Electoral College), who appoint four members of the board.

The principal function of MTS is to promote te reo Māori me nga tikanga Māori through the provision of a high quality, cost-effective Māori television service, in both Māori and English.

MTS is obliged to ensure that it broadcasts mainly in te reo Māori during prime time (and at other times a substantial proportion of its programmes must be in te reo Māori), and to have regard to the needs and preferences of children participating in te reo Māori immersion education, and all persons learning te reo Māori.

MTS also must provide broadcast services that are technically available throughout New Zealand and practicably accessible to as many people as is reasonably possible.

4.2.5 Radiocommunications Act 1989

The Act is administered by MED, which is primarily accountable to the Minister of Communications but is also tasked with advising the Minister of Broadcasting on (non-public) broadcasting issues.

This Act established the world's first radio spectrum management rights regime, under which blocks of spectrum are allocated as property rights analogous to land rights. After the passing of the Act, broadcasters and other radiocommunications service providers, *inter alia*, were able to acquire spectrum as tradable twenty-year management rights, or as spectrum licences issued by the management rights holder (in the case of broadcasting, the Crown), as opposed to traditional non-transferable radio licences. Under s57 of the Act, the rights holder or band manager may cancel a spectrum licence, subject to certain legal conditions, but this provision has never been invoked.

Current policy is to allocate commercial spectrum by auction or tender, on the principle that this ensures its highest value use. Although the Crown does reserve some frequencies for public policy objectives, such as public safety and security as well as public broadcasting related functions. In recent years spectrum caps (to preclude hoarding by a single operator), eligibility criteria (to limit market dominance) and implementation

conditions (to prevent spectrum from lying dormant) have been employed within the broader spectrum management regime.

4.2.6 Telecommunications Act 2001

The Telecommunications Act 2001, the industry-specific law applying to the broadband, internet and telephone service sectors, is primarily concerned with the promotion of competition.

> The purpose ... is to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.
>
> (Telecommunications Act 2001, Section 18)

The Act established the position of Telecommunications Commissioner within the Commerce Commission, incorporated an industry self-regulatory mechanism and created a process for costing and allocating universal access through the Telecommunications Service Obligations.

A 2006 Amendment (No 2) mandated unbundling of the local loop, giving other service providers access to the Telecom wireline network, and the operational separation of Telecom into wholesale, retail and network divisions. The Amendment also provided for 'Naked DSL'[25] and empowered the Commerce Commission to enforce industry-specific codes in respect of regulated services.

4.2.7 Other Relevant Acts

Commerce Act 1986

The Act established the Commerce Commission as an independent market regulator. The Commission is empowered to:

- Enforce relevant provisions of the Act;
- Investigate complaints from the public relating to such restrictive trade practices as acts lessening competition, price fixing and retail price maintenance;
- Make appropriate and legally enforceable determinations; and
- Grant clearances for mergers and acquisitions.

[25] ie, removed the requirement to take telephone service with bitstream-based Internet access services.

Copyright Act 1994

The commercial value of original work lies in the right to copy (and, by implication, to store, view, publish or transmit). The Copyright Act 1994 defines – in 'pre-digital' terms – the property right that exists in particular kinds of original work (broadcast, film, etc), the acts (publishing, performance, adaptation) that may be undertaken by the copyright-holder, and the nature of copyright infringement.

A proposed amendment to the Act extends the protections in the Act to digital works. The extended duties are proposed to reflect the increased risk of high quality infringing copies being produced and distributed using digital technologies, and uncertainty regarding the application of provisions of the current Act to digital works. Consistency with international copyright legislation (particularly the US Digital Millennium Copyright Act) and the potential economic cost of infringements were also factors.

The proposed Act:

- Replaces copyright owners' existing technology-specific rights to distribution via broadcasting and cable programme services with a technology-neutral distribution right;
- Provides copyright protection for all communication works; and
- Prohibits the manufacture and sale of devices that circumvent technological copyright protection mechanisms.

(Copyright Amendment Bill, 2007)[26]

The amendment also allows copying for personal use as long as the original copy is retained.

Companies Act 1993

The Act provides requirements for the incorporation, organisation, and operation of companies operating in New Zealand. In broad terms, the Act defines the duties of and relationships between companies and their directors, shareholders and creditors, whilst encouraging responsible management and protecting shareholders. The Act also sets out procedures for realising and distributing the assets of insolvent companies.

State-owned Entity Act 1986

All State-owned Entities (SOEs) are registered as public companies and are bound by the provisions of the Companies Act. Chief Executives of SOEs are accountable to their respective boards, and boards are accountable to the shareholding Ministers for the performance of the SOEs.

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[26] Copyright (New Technologies and Performers' Rights) Amendment Bill, before Parliament, April 2007.

The Crown Company Monitoring and Advisory Unit (CCMAU), an independent unit administered by the Treasury, provides advice to shareholding Ministers in their role in holding boards to account. The majority of SOEs operate in deregulated markets, and are on equal terms with the private sector, while some hold a monopoly.

Crown Entities Act 2004

The Act is administered by the State Services Commission and the Treasury (on reporting and accountability requirements).

The Act is an 'umbrella' Act covering all Crown entities and fits with individual entities' empowering Acts. The Crown Entities Act prevails over entities' Acts in the event of any conflict, unless the entity's Act expressly provides otherwise.

The Act provides a consistent framework for the establishment, governance, and operation of Crown entities and clarifies the accountability relationships among Crown entities, their board members, their responsible Ministers on behalf of the Crown, and the House of Representatives.

4.3 Current regulatory initiatives

Policies relating to AV media, generally speaking, are concordant with their governing legislation. Therefore, broadcasting policies and their associated work-streams focus primarily on specific issues in the content stage of broadcasting's value chain, whereas initiatives in telecommunications tend to focus on the more generic issue of competition in distribution and network markets.

4.3.1 Broadcasting Policy and Work-streams

There is a wide range of public policies relating directly or indirectly to broadcasting, originating from both Cabinet and responsible agencies.

Broadcasting Programme of Action

Informed by the stocktake of TV and radio undertaken in 2003, this broad policy programme, focussing largely on broadcasting content, is led by MCH and is based on six key objectives:

1) Achieving adequacy and certainty of public funding for broadcasting;

2) Strengthening public broadcasting;

3) Facilitating the successful development of digital broadcasting services;

4) Enhancing regional and community broadcasting;

5) Enhancing independence and responsibility in broadcasting; and

6) Enhancing the incentives for producing higher-quality content and schedules.[27]

Digital television and radio

In 2003 the government took a series of decisions intended to foster the development of free-to-air digital television services, including:

- Requests to TVNZ and MTS to prepare plans for digital services;
- Allowing holders of existing analogue licences to convert them to digital;
- Reserving sets of spectrum licences for digital 'simulcasting' purposes;
- Accepting the possibility of higher costs for government in subsidising digital content, but noting accompanying opportunities for development of the production industry; and
- Agreeing the importance of achieving the digital transition for the future viability of TVNZ and MTS.

The rationale for the government's subsequent support for the deployment of digital television and radio is contained in May 2006 Cabinet decisions designed to foster:

- *Universality* of access;
- *National Identity* through the provision of New Zealand content;
- *Economic transformation* through the stimulation of creative industries and investment; and
- *Ownership interests* by ensuring that public broadcasting services are viable as vehicles for achieving public policy objectives.

The government has therefore initiated a number of work-streams in support of its digital broadcasting objectives. These include the government's sponsorship of the Freeview platform through a commitment of $25 million in funding over five years and the provision of free access to digital frequencies until analogue switch off. These actions are aimed to facilitate the transition of free-to-air television to a digital platform. These offers were confirmed and licence renewal policies extended by further Cabinet decisions taken in October 2006.

On 14 November 2006, the government announced its decision to support the launch of two new TVNZ digital channels (now named as TVNZ6 and TVNZ7) with total funding of $79 million to be allocated over the next six years. The channels will be advertising-free and will focus on the provision of local content, and factual programming (such as news, current affairs and documentaries).

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[27] Building a Strong and Sustainable Public Broadcasting Environment for New Zealand - A Programme of Action, MCH website: http://www.mch.govt.nz/publications/public-broadcasting/public-bdcast.html

TVNZ6, with its three services – *Kidzone, Family* and *Showcase* – was launched on 30 September 2007.

The advantages of a managed transition to digital services include improving transmission quality for all New Zealanders, providing new and enhanced free-to-air services, with enhanced coverage of local news, current, cultural and sports events, as well as providing a shared space for communities. Digital services also enable interactive applications and content on demand via new platforms or devices such as digital video recorders. The transition should also ensure the visibility of services with a clear public broadcasting and national identity mandate.

Analogue Switch Off

In their 2006 report, Spectrum Strategy Consultants predicted that there would be a net national benefit (estimated at $230 million) if a full transition to digital TV (DTV) is achieved by 2015. Compulsory analogue switch-off (ASO) is considered to be in the national interest and is integral to the launch of FTA DTV.

For television broadcasting, a transition to DTV will require approximately 60% of New Zealand households who do not currently have digital STBs to convert to digital reception before ASO. There are several consequential issues including, for example, the cost to households of the necessary decoders (or DTV receivers), aerials or satellite dishes, and the investment implications for local, regional and national TV broadcasters.

An in-principle agreement has been reached by government and industry on an approach to the transition to ASO. Technical standards and consumer costs will be resolved by industry, while the government is to take the lead on such issues as public education, local and community digital broadcasting policies, though no timeframe has been set.

4.3.2 Telecommunications Policy and Work-streams

During the 1990s, in New Zealand and most other parts of the world, digital content was primarily accessed through computer software and CDs, with largely text-based static content being available via dial-up internet connections (email, web pages, news groups, etc). The last decade has witnessed a rapid growth in a new range of digital distribution and device technologies, including DTV, digital cameras, MP3 players, and high-speed wireline and wireless broadband networks, capable of delivering a vast array of digital content and applications. The personal computer is now just one of many devices on which digital content can be accessed or created on demand and to the personal preference of the individual user. Users increasingly want to access content how and when they want it, rather than being restricted by formats.

New Zealand currently ranks 22nd of 30 OECD countries in broadband take-up[28], which has been a key factor in the government's regulatory focus on promoting competition in telecommunications services. A major objective is to improve the speed and capability of digital networks and to support local pilot initiatives.

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[28] OECD country ratings in **Broadband Statistics, December 2006**

Digital Strategy

The Digital Strategy was launched in 2005, and provided a five-year action plan for the transformation of New Zealand's information, communications and technology (ICT) sector. The Digital Strategy was designed to bring together the activities of a variety of Ministries, which have an interest in aspects of New Zealand's ICT sector. A secretariat based in MED, co-ordinates all operational aspects. The Digital Strategy is currently under review and is due to be refreshed later in 2007.

The Strategy's prime objectives are:

> **Content:** Through the effective use of ICT, the social, cultural and economic value of New Zealand's stock of content will be unlocked, giving New Zealanders seamless and easy access to the information that is important to all aspects of their lives;
>
> **Confidence and capability:** All New Zealanders will have the necessary literacy skills to maximise their opportunities using digital means. The environment for ICT use in New Zealand must therefore be secure, reliable and well regulated. The public will be safety-aware, and will have a well-founded trust in the use of ICT;
>
> **Connection:** New Zealand will have an information and communications network infrastructure that provides the level of connection necessary to meet the high demands of an information-empowered society. It will meet the requirements of all users and will be readily accessible and affordable;
>
> **Communities:** ICT will be an important tool for realising the social, cultural and economic ambitions of our communities and citizens;
>
> **Businesses:** New Zealand businesses in all sectors will have the necessary knowledge, management capability and access to content and ICT infrastructure to create innovative products and processes and increase productivity. The ICT sector will contribute 10% of New Zealand's GDP by 2012.
>
> (Digital Strategy website, 24 May 2007)

The government's policy intentions with regard to digital content are summarised in the Digital Strategy[29], but the details are set out in the National Digital Content Strategy, a complementary action plan.

New Zealand Digital Content Strategy

The draft New Zealand Digital Content Strategy was launched on 6 September 2007.

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[29] see Section 2.3, Digital Strategy, NZ Government. Website: ,http://www.digitalstrategy.govt.nz/

The Digital Content Strategy is about:

a) Making content about and for New Zealanders accessible in a digital format;

b) Prompting the creation of new digital content and ensuring that as much relevant content as possible is accessible to as wide an audience as possible;

c) Understanding the economic benefits and potential of digital content, as an industry;

d) Recognising and protecting the value in digital content; and

e) Ensuring the long-term preservation of our content for future generations. [See p 7 of Strategy].

It sets out a framework for considering digital content, along with five key outcomes and goals. These are:

Outcomes	**Goals**
Digital content is being created and protected	New Zealand is a world leader in creating and innovating digital content
Digital content is accessible and easily discovered	Significant New Zealand content is easy to access and discover by New Zealanders
Digital content is being shared and used	New Zealanders and New Zealand organisations are at the forefront of creating and sharing digital content
Digital content is being managed and preserved	Content important to New Zealand is managed and kept safe for use by present and future generations
Digital content is understood	New Zealanders are well informed about the role and potential of digital content in our digital future

The government has allocated $22.9 million over the coming four financial years (starting in 2007/08) for new initiatives identified in the New Zealand Digital Content Strategy. These include:

- 3D Digital Graphics Cluster: $7.0 million;
- Digital New Zealand: Digital Communities: $3.3 million;
- Making More Statistical Information Freely Available: $6.0 million;
- People's Network: $4.4 million;
- Digital Archives Preservation Strategy: $1.9 million;
- World Internet Project: $150,000 every second financial year, starting in 2007/08.

It is anticipated that further announcements on digital content funding will be made in future years.

Telecommunications Stocktake

In 2005, the Government completed an implementation review of the Telecommunications Act 2001. Subsequently, the incoming Government initiated a stocktake review of the telecommunications regulatory environment in view of concurrent concerns about broadband take-up and infrastructure. The outcome of the review was a package of measures, subsequently enacted in December 2006, that focussed on facilitating competition by introducing a range of unbundled telecommunications services at the wholesale level.

Internet Projects

MCH has created and continues to develop several major websites to share information about New Zealand history and culture and extend the use of internet-based and multimedia technologies. These projects include the development of a 'cultural portal' on the internet, www.NZlive.com, to provide links and information relating to cultural experiences in New Zealand and Te Ara, an online encyclopedia of New Zealand.

Advanced Network (KAREN)

KAREN (the Kiwi Advanced Research and Education Network) provides high-capacity, high speed internet to New Zealand's research, education and innovation sectors. KAREN is administered by the Research and Education Advanced Network New Zealand Ltd (REANNZ), a Crown-owned company set up to establish, own and operate a high-speed telecommunications network for the research and education sectors.

Other

A number of other projects are being undertaken across government in support of the Digital Strategy, including the Department of Education's promotion of NetSafe, an independent non-profit organisation which promotes internet safety. Government is also working in partnership with industry and the community to develop broadband capacity and skills: for example, the ICT Skills Shortages Project led by the Department of Labour.

4.3.3 Non-regulatory measures

A number of alternatives to regulation can be employed by governments to facilitate policy implementation, including funding self-regulatory industry codes and leadership by example.

Incentive funding

From a government perspective, commissioning by a state funding agency is a useful policy lever, in that the content, platform and/or end-user (audience) can be specified as part of the funding contract. In addition to funding provided by New Zealand On Air and Te Māngai Pāho (see pages 34 and 36), a number of other agencies are involved in digital media incentives.

The Community Partnership Fund

A fund of $20.7 m is aimed at encouraging communities to identify and develop initiatives to address their own ICT needs in partnership with business and/or government.

The fund supports local partnerships: to develop ICT capabilities; address issues of confidence in using ICT; strengthen community projects through the use of ICT; create and digitise distinctive and valuable New Zealand content; and harness innovation in design and content.

Broadband Challenge

A fund of $24.0 m provides seed funding to enable the roll-out of affordable broadband based on open-access principles. The fund is aimed at promoting high-speed capacity in regional centres, with a particular focus on innovative ways to make broadband available to remote and under-served communities.

MED concurrently made available 148 area spectrum licences in the 3.5 GHz band[30], for local and regional broadband development and Project PROBE.

Leading by example

E-Government

The E-government Strategy is a cross-government strategy which aims to ensure that information and communication technologies are integral to the delivery of government information, services and processes.

The government has invested heavily in e-Government through:

- e-GIF, the *e-Government Interoperability Framework* team located within the State Services Commission, which has developed and published common ICT and radiocommunications interoperability standards for all government agencies;

- The *e-Government Portal*, a web site through which people are able to find online and offline services and information provided by New Zealand government organisations, including regional and local government; and

- Government ICT procurement workshops led by industry to improve government purchasing practice, plus a specialist ICT procurement training module for public sector ICT purchasers. Policy work is being undertaken to address procurement issues with small suppliers.

[30] Suitable for the deployment of WiMax-based broadband technology

New Zealand Geospatial Strategy

This project is designed to enhance knowledge of and access to geospatial assets owned, maintained or used by the government. Such assets have a wide range of 'public good' applications, including public protection and disaster relief, national defence, resource management, biosecurity and economic development.

ICT Strategic Framework for Education

The purpose of this initiative is to guide and coordinate ICT investment across the education sector. It has already established a federated search system giving access to educational materials in Australasia and the US, and has a number of other projects in train, in collaboration with Australian resources, iwi and Pacific people.

Self-regulatory levers

On some regulatory matters, the government has negotiated agreements with industry to develop self-regulatory codes, thereby removing the need for further legislative directives or agency intervention.

The advantages of self-regulation include that those closest to the issues are directly involved in the development of codes and the sector is likely to have a greater sense of ownership and so they can achieve greater compliance. However, there also risks that self-interest may prevail over the wider public interest, there may be issues over public confidence and enforcement may not be as transparent as a legislative process.

Some examples of self-regulatory regimes in New Zealand's current media environment are:

- The Advertising Standards Authority;
- Industry codes of practice negotiated with the participation of the BSA;
- The Television Local Content Group (TVNZ, MTS, TV3, Prime TV, the Screen Production and Development Association and NZ On Air);
- The New Zealand Press Council;
- The self-managed New Zealand music content guidelines developed by the Radio Broadcasters' Association (which have frequently been exceeded since their adoption); and
- The 2007 voluntary relinquishment before expiry of 2.3 GHz broadband spectrum management rights, to enable a reconfiguration and reallocation for WiMax-based technology.

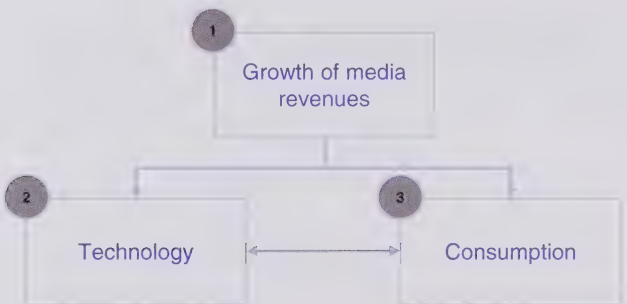
5 Global market trends

To determine the suitability of the current legislative framework and regulatory settings, it is first necessary to understand and assess the ways in which the media market is changing. The objective of this chapter is to identify and examine the most important global trends across the media marketplace.

This chapter sets out an analysis of key changes in relevant overseas markets. This includes developments in consumer behaviour, technology, industry, value chain structures and in competition dynamics. The chapter also includes a review of significant changes occurring across each of the primary media distribution platforms: TV, radio, broadband and mobile. The following chapter summarises the different policy and regulatory responses adopted across the world.

The chapter starts with an overview of the key revenue trends in media across Europe. It then proceeds to looks at the key drivers of these trends, which are technology developments and changes in consumer behaviour (see Exhibit 16 below), and finishes by examining some of the regulatory responses to these trends.

Exhibit 16: Drivers of change in the media market



5.1 Growth of media revenues

In Western Europe[31], digital media revenues are enjoying much faster growth than those of 'traditional media', such as TV, print or radio.

Over the last three years (2003-2006) new digital media have gained a strong presence in the European media landscape. Although starting from significantly smaller volumes, digital revenues have been growing much faster than the revenues of traditional platforms. For example, in the last three years TV revenues have been growing at 5% Compound Annual Growth Rate (CAGR), while online revenues grew at 48% CAGR, mobile at 47% CAGR and Video On-Demand (VOD) at 41% CAGR.

[31] Western Europe according to Informa/Zenith's definition comprises of: 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK

In the future, this growth is expected to continue, with digital media enjoying a 25% annual increase in revenues versus 5% CAGR for the traditional TV revenues. As a result, digital media will become an increasingly important revenue stream for both new and traditional media players.

Exhibit 17: Media revenues in Western Europe (€bn)

	2003	2006	2010	CAGR 03-06	CAGR 06-10
TV ad	23.4	25.2	28.2	3%	3%
Pay TV (subs)	22.4	27.3	34.8	7%	6%
TV total	**45.7**	**52.5**	**63.0**	**5%**	**5%**
Online	2.1	6.8	16.5	48%	25%
Mobile	1.0	3.2	7.6	47%	24%
VOD	N/A	0.2	0.5	NA	57%
Digital total	**3.1**	**10.0**	**24.5**	**47%**	**25%**

Source: Spectrum / Value Partners analysis; Zenith

5.1.1 TV revenues

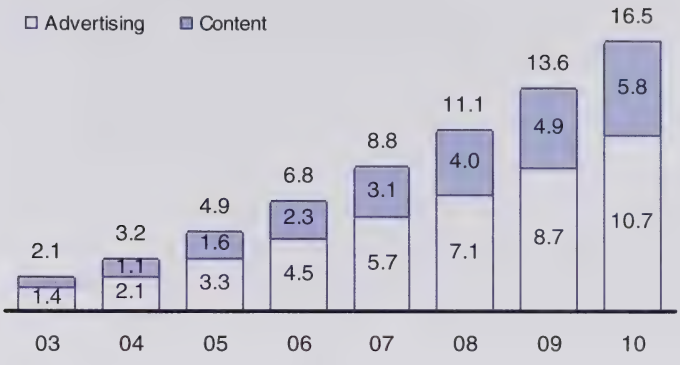
In Western Europe, the TV industry appears to have reached a maturation point in its development, growing only at 5% CAGR in 2003-2006. This growth rate is expected to remain stable, with the uptake of pay-TV as the key driver for growth, as the consumer proposition becomes more appealing and affordable. Growth of advertising revenues is expected to remain at 3% CAGR, with regulatory initiatives (e.g. advertising restrictions in TVWF[32]), technology development (e.g. PVRs, which enable the viewers to skip advertising) and increasing desirability of non-TV advertising outlets combining to slow the growth of TV advertising.

5.1.2 Online revenues

Online revenues in Europe have enjoyed a rapid growth, largely driven by broadband take-up and the availability of new online products and services. Growth is set to continue, and is predicted to rise from €6.8bn in 2006 to €16.5bn in 2010 (CAGR 25%, see Exhibit 18). Currently, the main driver for the growth of online revenues is advertising, accounting for 66% of the total.

[32] TV Without Frontiers is an EU directive seeking to harmonise broadcast legislation across Europe

Exhibit 18: Internet revenues in W. Europe (€bn)



Source: Spectrum / Value Partners analysis; Zenith; Jupiter

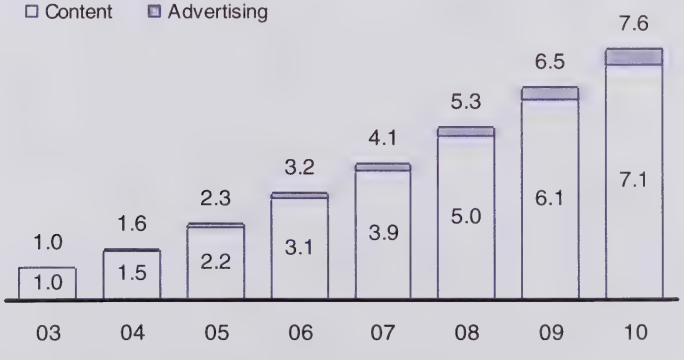
The growth of online advertising revenues is underpinned by a growing online audience and increasing time spent online by consumers, as well as by increasingly effective online advertising products and improving advertising formats (e.g. pay per click, search, contextual advertising).

At the same time, European consumers are increasingly willing to pay directly for online content and services. This development is prompted, on the one hand, by increasing security and reliability of online payments and, on the other hand, by the growing range of attractive products and services available online.

5.1.3 Mobile revenues

Mobile advertising and content revenues have also grown strongly, from €1bn in 2003 to €3.2bn in 2006 (48% CAGR). This growth is expected to continue in the future, albeit at a slower rate: over the next four years, media related mobile revenues are forecast to grow at 24% CAGR, reaching €7.6bn by 2010.

Exhibit 19: Mobile advertising and content revenues in W. Europe (€bn)



Source: Spectrum / Value Partners analysis; Yankee; Jupiter

Unlike online revenues, mobile growth is primarily driven by consumer spend on content and services rather than advertising. This trend was occurred due to a number of factors, including the attractive micro-billing capability of mobile phones (premium SMS) and consumer willingness to pay a premium for mobility (e.g. ringtones). On the other hand, the small screen size of mobile phones has acted as a natural restriction on mobile advertising.

The mobile advertising market is forecast to remain relatively small in size. However, the emergence of pay-per-click mobile advertising and the entry of major players into mobile advertising market (e.g. Google) could fuel the future growth of mobile advertising.

5.1.4 IPTV and VOD revenues

In comparison to other digital platforms, IPTV (internet protocol TV) and VOD (video on-demand) still account for a very small share of digital revenues: VOD revenues for the entire Western Europe in 2006 reached only €200m, versus €3.2bn for mobile and €6.8bn for online (see exhibit 19).

In the future, however, IPTV and VOD revenues are expected to increase, partially displacing video rental services, such as Blockbusters. VOD sales in the United States, primarily delivered over cable networks, are already showing rapid growth.

5.2 Technology developments

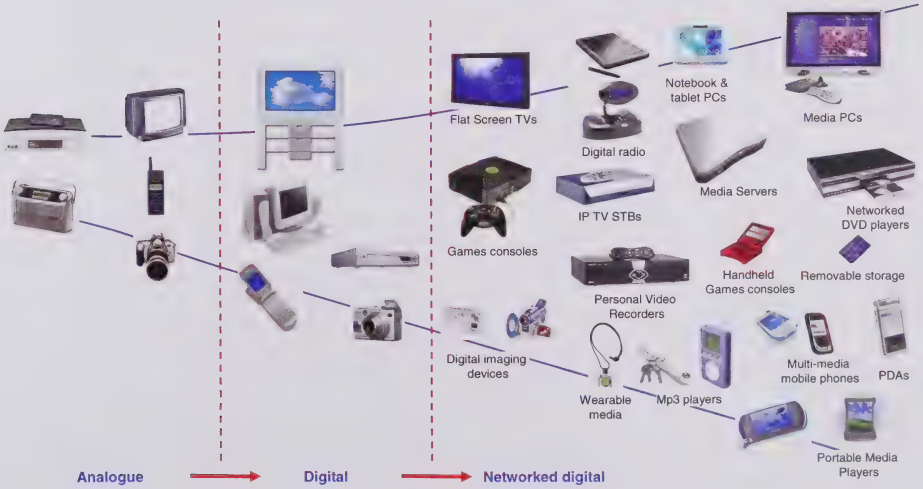
A number of significant changes in technology, such as the proliferation of digital devices, increased penetration of broadband and mobile distribution, have a strong impact on the development of media consumption patterns.

Exhibit 20: Key technology drivers of market changes

Devices	• Networked digital media technologies are proliferating, providing consumers with an increased choice of devices and platforms for content consumption
Broadband distribution	• Broadband speeds are increasingly making the internet a viable platform for rich content delivery • In addition, a number of complementary devices / technologies are facilitating access to rich digital content
Mobile distribution	• To date, 3G mobile has been relatively disappointing in terms of its capability as a media platform • However, other portable entertainment devices are developing rapidly
Interactivity	• A new wave of technologies and approaches is helping to improve the digital media user experience and make it more interactive
Content production	• In addition, technologies are lowering barriers to media production and distribution for both individuals and businesses – enabling new forms of user-generated content

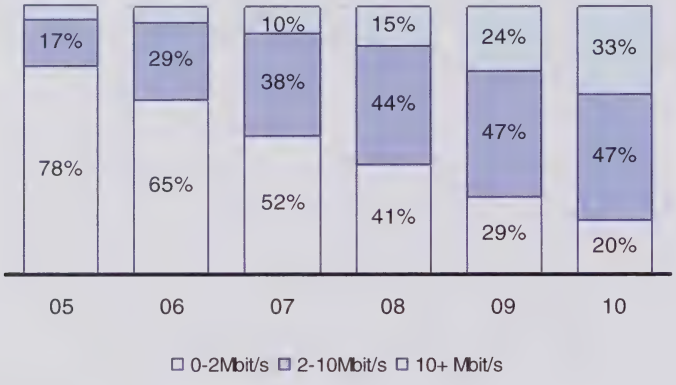
Networked digital media technologies are proliferating, providing consumers with an increased choice of devices and platforms for content consumption (see Exhibit 21). Previously, analogue devices had dedicated functions, such as telephone for voice calls or computers for data processing. However interoperable digital devices can provide access to multiple types of service and content (voice on a PC, TV on a mobile phone, etc.). In addition, these new devices have capabilities which allow customers to edit, share and store the content, thus gaining a greater degree of control over the medium and over the providers of media services.

Exhibit 21: Proliferation of digital technologies



In addition to the greater capabilities offered by consumer devices, the capability of delivery platforms and networks is also growing. For example, broadband speeds across Europe are increasing (see Exhibit 22) and are now able to support much richer types of video content and faster downloads of large video files. Ultimately, these enhanced capabilities have a potential to increase uptake of high quality streamed video and true VOD via instant access. Telecom operators and other providers will increasingly be able to offer broadcasting-like services over broadband.

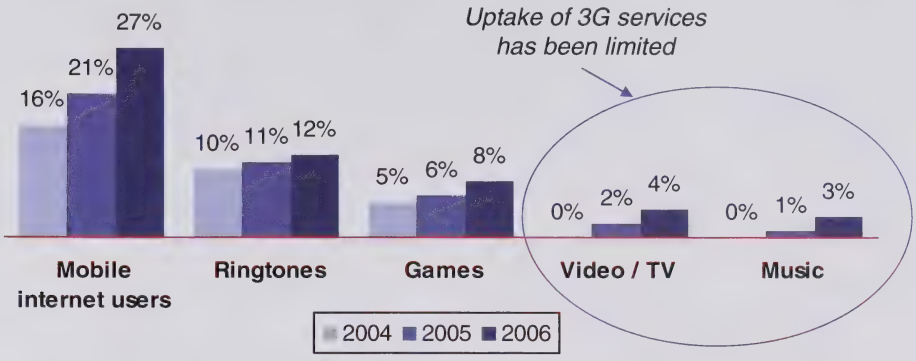
Exhibit 22: Speed of consumer DSL connections in Western Europe (%)



Source: Spectrum / Value Partners analysis; Ovum

Unlike broadband, the capabilities of 3G mobile as a media platform have so far been limited. Relatively low speeds, high cost of data charges and, often, poor functionality of services have all contributed to limited broadcasting-like content uptake on mobile platforms. However, a range of network upgrades is being rolled out across a number of European countries. These include mobile broadcast networks (e.g. DVH-H) and 3.5G/4G mobile data services (e.g. HSPDA). These upgrades are aimed at enabling mobile networks to support richer mobile media services, including broadcast quality TV content.

Exhibit 23: Media usage in W. Europe (% of active mobile subscribers)



Source: Spectrum analysis, Jupiter, European Mobile Content & Services

While use of 3G services has been limited to date, the wider mobile entertainment space has seen a number of successful innovations from different areas of the market. According to European Media Usage Trends[33], 25% of UK consumers owned an MP3 player by 2006. In the future, uptake of mobile entertainment devices is likely to grow, due to reducing prices and improved consumer experience. For example, MP3 players are now taking on video capabilities such as the Archos, iPod and iPhone.

Finally, advances in technology enable a much greater level of interactivity than has been possible in the analogue world and are lowering barriers to media production for both individuals and small businesses. As illustrated in the examples below, both creation and reaction to media content are becoming much easier due to the development of a number of technical enablers.

[33] European Media Usage Trends by Age Group 2004 to 2006, Forrester research, December 2006

Exhibit 24: Examples of technology lowering barriers to media production and interactivity

Technology	Example	Description
Blogs	• Wordpress • Typepad	• Low cost easy-to-use online publishing
Digital photography	• Digital cameras • Camera phones	• Low cost photography
Digital video	• Digital video cameras	• Low cost video
Editing software	• FinalCutPro • Photoshop	• Video and image editing on low cost PC
Hosting and sharing platform	• Flickr • Google Video	• Cheap online hosting and storage for rich media
Promotion	• Myspace • Email	• Provides a means of promoting content cheaply

5.3 Changing consumer behaviour

Changes in both technology and lifestyle are related to a number of important changes in consumer behaviour. These include time-shifted viewing, snacking on content and multi-tasking, each of which have profound effects on media revenues and the structure of the broadcast value chain (see Exhibit 25).

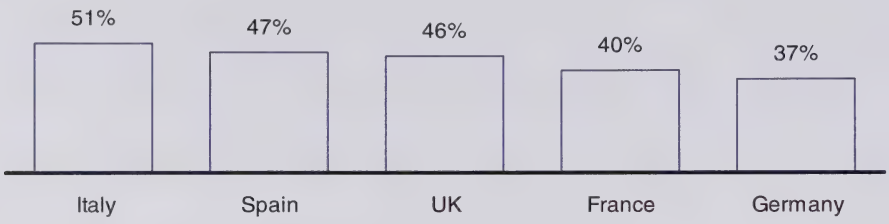
Exhibit 25: Key emerging consumption habits

Platform-agnostic consumption	• Consuming multiple types of content through multiple platforms (e.g. playing games on digital TV or watching video through the internet)
Snacking	• Consuming media in short bursts rather than prolonged periods of time (e.g. watching mobile clips, flicking through multiple channels)
Multi-tasking	• Simultaneously consuming different media (e.g. listening to the radio whilst surfing the internet)
Time-shifting	• On-demand viewing of traditional broadcast (TV or radio) content, using PVRs, online media players
Interacting	• Interacting with the media consumed (e.g. text voting during TV programmes, choosing a specific video stream during a sports broadcast)
Organising	• Manipulating and filing content in ways tailored to own preferences (e.g. organising albums on MP3 players, creating 'favourites' online)
Sharing	• Passing on content such as music, video and text to friends and the wider online community
Searching	• Content increasingly accessed directly through the use of a search tool, likely to extend into other media such as television programmes

Historically, individuals would consume streamed content on a 'linear' basis, within a regular schedule, relying on third party content aggregators (or channels) to select, bundle and schedule content.

The digital transformation has enabled media consumers to start developing new habits. These include using new means of accessing content (e.g. searching and sharing on a platform-agnostic basis), developing new approaches to consuming content (e.g. snacking, multi-tasking) and new ways of controlling content (e.g. organising, time-shifting, interacting). For example, enhanced capabilities of mobile phones have led to a large proportion of European consumers using their phones to capture both stills and video (see Exhibit 26 below). Furthermore, these clips are automatically produced in a format, which is easy to share (i.e. send to another user or post online).

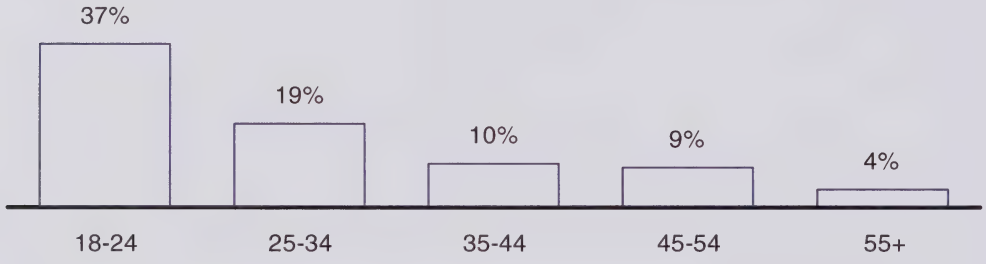
Exhibit 26: % of 3G users capturing video on their phones at least once a month



Source: Spectrum / Value Partners analysis; Mobile media

In the future, these trends are expected to intensify, as it is the younger generations that predominantly are adopting these new ways of consuming and distributing media content (see Exhibit 27).

Exhibit 27: Posting content online by age group (UK)



Source: Spectrum / Value Partners analysis; Ofcom The Communications Market 2006

5.4 Changes in the value chain and market structure

This section assesses two major areas of change to the media value chain: vertical change (i.e. the merge of value chains from several traditionally distinct markets) and change in business dynamics (i.e. new relationships and business models across existing value chains).

5.4.1 Vertical change

One of the major trends that has evolved from the new technological and consumer trends is the coming together of multiple, previously distinct markets. This has occurred as different market players strive to gain ownership of the end user, who is accessing broadcasting-like content through a variety of different platforms.

Traditional media players are developing a presence across new media platforms, in order to remain at the forefront of an increasingly competitive multi-media market. For

example, the largest commercial TV provider in Germany, ProSiebenSat.1, has acquired and developed a number of new media properties (in online, mobile and IPTV), both to support its core TV proposition and to explore new opportunities in the media market (see Exhibit 28).

Exhibit 28: Digital media properties of ProSiebenSat1 (2007)

In addition, new forms of content, new methods of distribution and the availability and accessibility of recording devices have lowered the barriers to entry in broadcasting markets. This trend has enabled a number of new, non-traditional media players to enter the market. For example, in a role similar to broadcast schedulers, mobile media has 'aggregators' who pull together and package media content for mobile usage. The new entrants are therefore distributing, and in many cases, creating content in direct competition with traditional broadcasters.

The new developments in technology and consumer behaviour enable telecom operators, broadcasters and other new media entrants to develop similar media propositions and offer them to the consumer (direct or via third parties). As exhibit 29 illustrates, mobile TV services are now available from players that operated in distinct markets in an analogue world. They now, however, have potentially competing interests and activities.

Exhibit 29: Mobile TV propositions, offered by different types of media market players

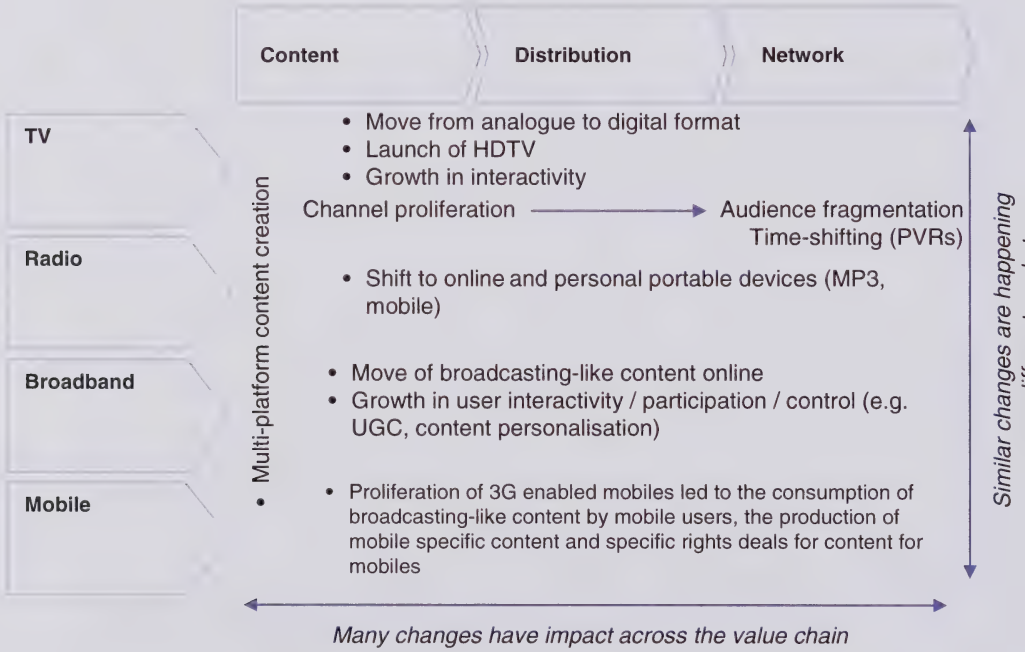
Type of player	Description	Examples
Operators	• Operators managing their own mobile TV service	• June 2006: 3 Italy launched a commercial DVB-H mobile TV service • Built own DVB-H network (€220m) • Manages entire end-to-end service
TV Players	• Broadcasters / pay TV platforms developing their own service in partnership with operators or independently	• SKY has developed and implemented a mobile TV proposition across the world, often cross-selling this as a package with its traditional or Online services
Aggregators (new type of player)	• Specialists who package content and manage services for operators	• Mobi-TV aggregator has secured content and delivery platform through partnering with over 80 international broadcasters / MNOs, including - 3UK, Orange GMTV (UK) - Discovery, Sprint, CNN (US)

What were distinct markets are increasingly now merging into one or at least a series or inter-related adjacent markets. This trend is compelling a range of media players to compete against each other across the value chain for such limited resources as consumer attention and a share of consumer entertainment spending.

The key components of the 'broadcasting' value chain, analysed in this report, are 'Content', 'Distribution' and 'Network'. For the purposes of this report:

- **'Content'** is taken to mean 'broadcasting-like', digital audio visual and audio material capable of being delivered to the user by electronic means.
- **'Distribution'** is the process by which content is purchased, aggregated, packaged and released for delivery to the end user.
- **'Networks'** are the means by which content reaches its audience, encompassing broadcasting transmission networks, wireline and wireless telephony and data networks.

Exhibit 30: Merged media value chain and trends [ILLUSTRATIVE]


Content
Distribution
Network
TV
Radio
Broadband
Mobile
Multi-platform content creation
• Move from analogue to digital format
• Launch of HDTV
• Growth in interactivity
Channel proliferation
Audience fragmentation
Time-shifting (PVRs)
• Shift to online and personal portable devices (MP3, mobile)
• Move of broadcasting-like content online
• Growth in user interactivity / participation / control (e.g. UGC, content personalisation)
• Proliferation of 3G enabled mobiles led to the consumption of broadcasting-like content by mobile users, the production of mobile specific content and specific rights deals for content for mobiles
Similar changes are happening across different markets
Many changes have impact across the value chain

As similar changes are taking place across different markets (e.g. the creation of multi-platform content), media players are changing the ways in which they approach and engage with content creation and distribution.

To capitalise on these trends, a number of established media players are expanding their business interests and/or re-structuring to create broader, multi-media entities. For

example, the UK public service broadcaster, the BBC has undergone a radical re-structuring to support its digital development. Its new corporate structure reflects a new approach to commissioning: 360⁰ commissioning aims to establish a principle of platform-neutrality and creative / editorial coherence across all media in the BBC's operations.

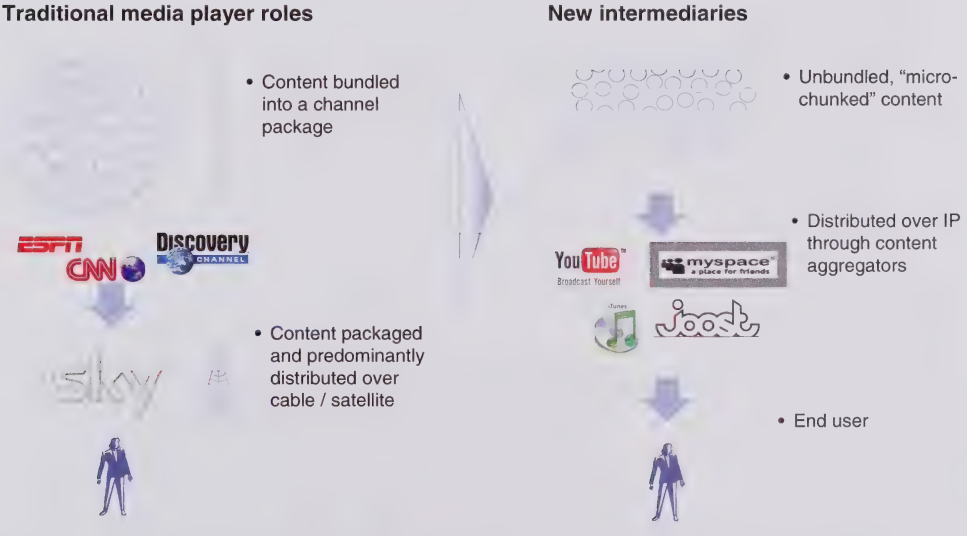
A clear trend of convergence of the diverse media markets is emerging across different geographies and players, resulting in a number of players owning assets and having relationships across television, radio, broadband and mobile markets.

5.4.2 Change in business dynamics

Developments in the value chain, such as the convergence of different markets, and the entry of new types of media players, are acting to increase competition in the market and put pressure on a number of existing revenue models.

For example, newspaper publishers face revenue and margin erosion, as their main revenue-generating service, classified advertising, is rapidly moving to the online space. At the same time, traditional TV players are, in part becoming displaced by the new entrants, as their content becomes accessible to audiences through alternative platforms (see Exhibit 31 below).

Exhibit 31: Shift of relationships and dynamics in content distribution (Illustrative)


Traditional media player roles
New intermediaries
• Content bundled into a channel package
• Unbundled, "micro-chunked" content
• Distributed over IP through content aggregators
• Content packaged and predominantly distributed over cable / satellite
• End user

In the competition for revenue, traditional TV business models based on ad revenue are being adopted by such new media platforms as online and mobile. In addition, the media market is witnessing the development of such relatively innovative revenue models as revenue share or content propositions developed purely as an advertising tool (see Exhibit 32 below).

Exhibit 32: Examples of business models in digital media

	Advertising	Subscription	PPV	Advertising tool	Transactional revenue share
Traditional models	• Inserted in breaks in the content (TV, Radio, Print) • Embedded in the content (product placement)	• Ongoing fixed fee for accessing content (e.g. Pay-TV, magazines)	• One-off fee to access specific piece of content (Pay-TV, print)	• Content developed as an advertising window (e.g. free magazines, produced by retailers)	• N/A
New media models	• Model extended to online and mobile (e.g. banners, links to online shops)	• Model extended to online and mobile (e.g. subscription to mobile content or to a website)	• Model extended to mobile and online (e.g. VOD, mobile content)	• Companies developing non-revenue generating mobile and online portals as means of advertising	• New digital media used as billing platforms with operators taking revenue share (e.g. mobile content)

In summary, market developments have led to the emergence of new players, new business dynamics and new revenue models across the broadcasting value chain.

5.5 Key changes by market segment

The section above outlines the key changes in the market and the value chain, which impact across a number of markets. In the following sections, some of the key trends will be reviewed in more detail with a particular focus on those trends which have had a significant impact on specific, horizontal markets. Examples are drawn from countries where the digital transition is further advanced, in particular the UK, which has the world's highest level of digital TV viewers and whose analogue switch-off started in October 2007.

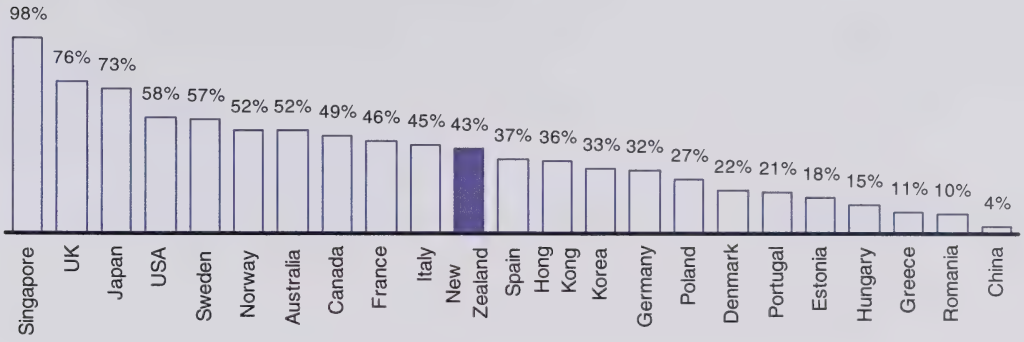
5.5.1 Television

Traditional broadcasting remains the dominant media platform in terms of audience share and offering mass appeal for advertisers. Broadcasters are, however, responding to the more competitive, multichannel, multiplatform environment of a digital age and are consolidating their competitive positions by building channel portfolios to retain audience share, streamlining their operations and adding new features to retain television's mass audience appeal.

Digitalisation

Across the world, digital TV is taking an increasingly prominent place as a TV delivery platform, with Singapore, the UK, Japan and the USA leading the way (see Exhibit 33 below).

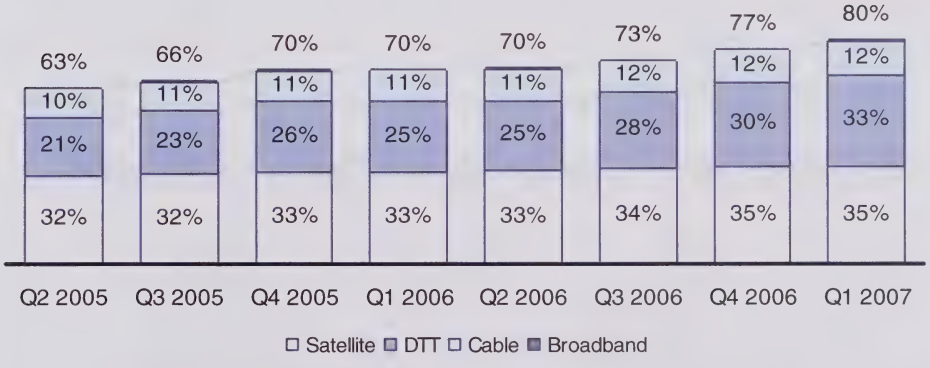
Exhibit 33: Digital TV penetration in global markets by the end of 2006 (% of TV households)



Source: Spectrum / Value Partners analysis; ScreenDigest

The rapid growth of digital broadcasting is perhaps best illustrated by the UK, where the level of digital penetration has increased by over 10% in one year, up from 70% in Q1 2006. By the end of March 2007, 80.5% of television households in the UK were viewing digital television across a variety of platforms: digital satellite, digital cable, digital terrestrial and broadband[34] (see Exhibit 34).

Exhibit 34: Take-up of digital technology in the UK (% of primary TV sets)



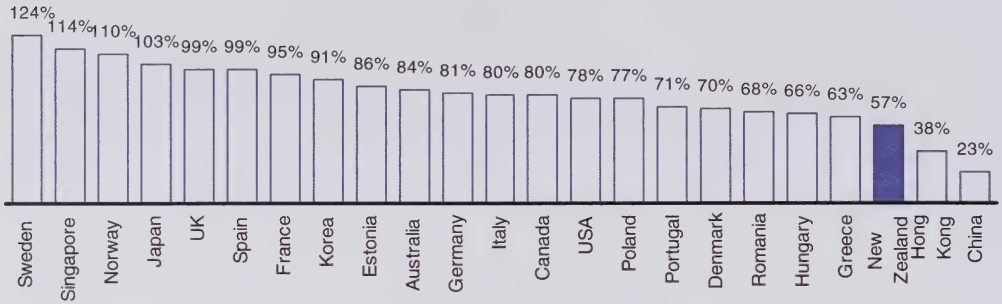
Source: Spectrum / Value Partners analysis; Ofcom

Whilst the UK's advanced pay-TV market and the government's clear commitment to ASO have been critical to the UK's success, the role of free-to-air (FTA) services should not be under-estimated. As the exhibit above demonstrates, FTA DTT is rapidly catching up with SKY (the primary UK pay-TV satellite provider), at 33% primary TV set penetration versus 35% for SKY. The DTT customer base, growing at 8.7% per month, is now expected to overtake the satellite platform, which has only retained a 0.4% monthly growth.

[34] *Digital Television Progress Report* for the first quarter of 2007 (January-March), Ofcom, June 2007

In the future, the level of digitalisation is expected to grow across all European markets, with penetration of digital TV varying between 63% of households in Greece and 124% in Sweden, where each household is estimated to have at least one DTV set (see Exhibit 35 below).

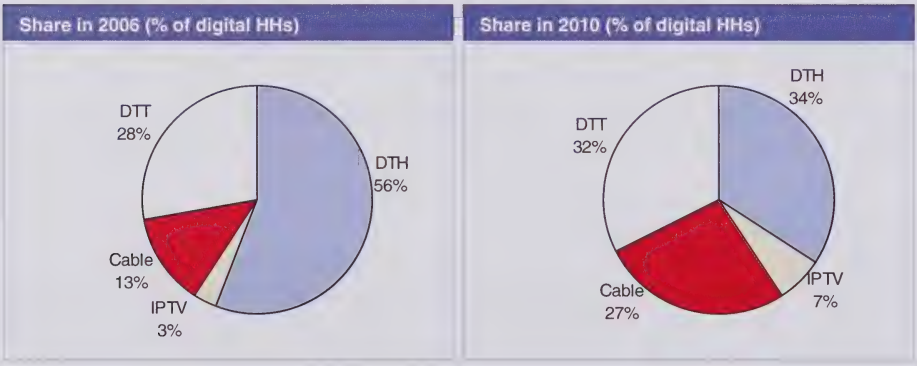
Exhibit 35: Digital TV penetration in global markets by the end of 2011 (% of TV households)



Source: Spectrum / Value Partners analysis; ScreenDigest

As demonstrated by the UK example, much of the historic growth of digital across Europe was driven by satellite penetration, which still remains the dominant digital platform with 56% of market share (see Exhibit 36 below). However, future growth is expected to be driven by the continuing uptake of digital terrestrial services (DTT), which by 2010 are expected to reach similar penetration levels to the satellite platforms, if not much higher.

Exhibit 36: Share of digital households in Western Europe by platform



Source: Spectrum / Value Partners analysis, ScreenDigest

HDTV

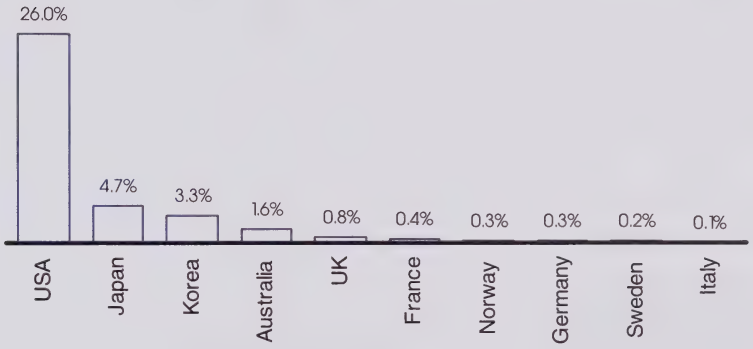
An increasingly competitive environment drives broadcasters to find new ways to differentiate their products in an attempt to attract and retain viewers. One key feature in this drive for difference is High Definition TV (HDTV). International broadcasting heavyweights in the US, Japan and increasingly across Western Europe are now making

significant investments in HDTV on the basis that multichannel alone will not secure their market position, particularly in a global market.

By the end of 2006, 48 million households had HDTV (out of an estimated 1.2 billion total households globally with a television). The US and Japan accounted for approximately 80% of those worldwide HDTV households[35]. Canada, Australia, and South Korea account for the remaining share with relatively low take-up in the UK and Western Europe.

HDTV technology is currently spectrum intensive, which is a particular issue for countries managing spectrum scarcity such as the UK or using older compression standards. The price of receivers remains high and the choice of HD content is currently relatively limited. Therefore, penetration of HDTV services is still comparatively low in most markets.

Exhibit 37: Penetration of HDTV service in 2006 (% of TV households)



Source: Spectrum / Value Partners analysis; ScreenDigest

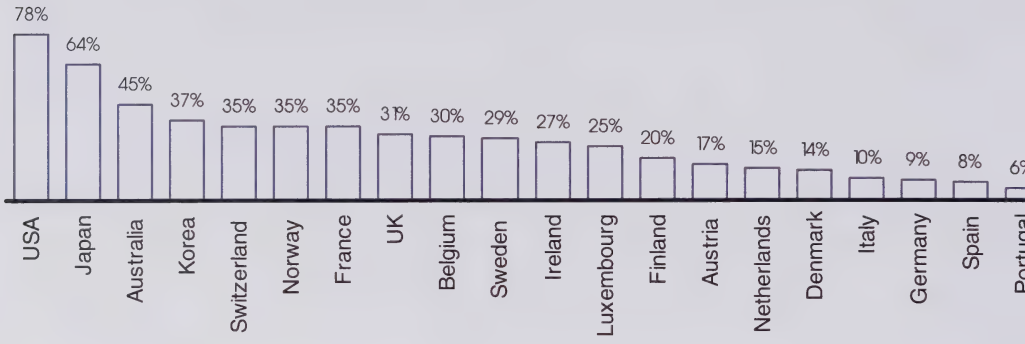
The US market appears to be the only one where HDTV content currently takes a prominent place. The relative success of HDTV in the US can largely be attributed to three key factors: the majority of subscribers receive their TV through satellite or cable (as opposed to terrestrial), which alleviates spectrum constraints; the fierce competition between US cable and satellite providers and the subsequent commercial imperative to provide a differentiated TV product; and, finally, the poor quality of standard definition TV (SDTV) in the US. However, even in the US, the major market for HDTV, there appears to be a 'disconnect' between the provision of HD services and the penetration of HDTV sets. Currently, only one-third of US households with HD-capable TV sets are actually using them to watch HD programming, which suggests a paucity of consumer understanding and perhaps the insufficient availability of HD content.

As European broadcasters and producers are increasingly required to produce programmes in HD format for the lucrative export markets of Japan and the US, it seems an intuitive and practical progression to increase the promotion and consumption of this

[35] *HDTV: A Global Analysis*, Adam Thomas, Informa Telecoms & Media, April 2007

HD content in their domestic markets. However, the likelihood of HDTV becoming 'the' predominant, global TV standard is not assured and most markets are expected to have a less than 50% penetration of HD services by 2011 (see Exhibit 38 below).

Exhibit 38: HDTV penetration in some global markets in 2011 (% of TV households)



Source: Spectrum / Value Partners analysis; ScreenDigest

IPTV and VOD

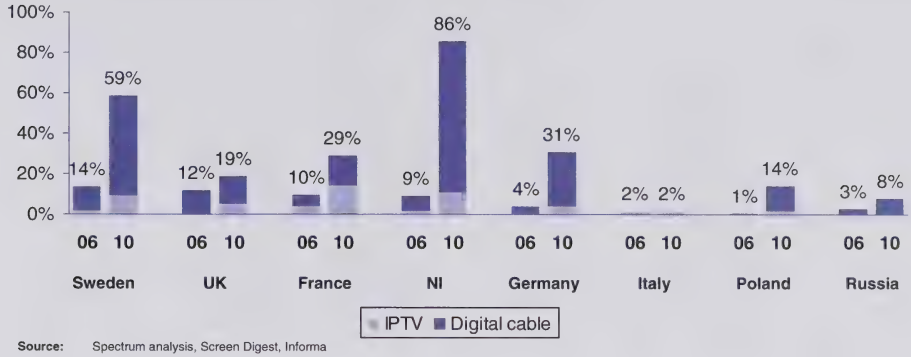
A number of Video-On-Demand (VOD) services and IPTV (Internet Protocol Television) propositions are available in the global market. However, these can be classified into:

1) Closed platforms for VOD, which require set top box and network infrastructure, and are expected to be viewed on TV; and

2) Content, available from the public domain and delivered via the internet, which is predominantly viewed on PCs.

In the first instance, VOD content is sold as a supplement to the core product of the provider (cable TV or Broadband), with cable being the most popular platform in Europe due to its interactive nature and often high spare capacity. It is pushed by cable TV operators to generate additional revenues and increase the attractiveness of their offer to the audience. In the future, the cable platform is expected to remain the dominant platform in an on-demand market (see Exhibit 39 below).

Exhibit 39: Current and forecast IPTV and digital cable penetration



Source: Spectrum analysis, Screen Digest, Informa

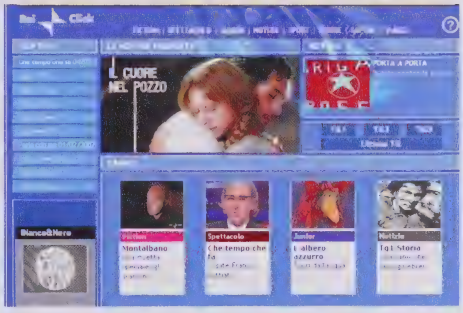
IPTV services are typically provided by fixed telecom operators who are looking to increase broadband sales, customer loyalty and ARPUs (average revenue per unit) by offering enhanced TV services, often combining broadcast TV, VOD and interactive services. It potentially offers a differentiated and attractive home entertainment proposition through additional features such as on-demand and interactive services. One of the first operators to launch this proposition was an Italian FTTH operator Fastweb (see Case Study below).

Exhibit 40: Case Study: Fastweb IPTV proposition

Case study

- VOD offered since 2001 FASTWEB
- Subscription, PPV and free models
  - subscription: €8/month, for access to 1300 TV series and movies
  - PPV – 700 additional titles
  - free Rai TV catch up online (RAI Click)
- €20.7m VOD consumer transaction revenues in 2006
  - none from TV content
- On demand monthly ARPU of €8

Screenshot

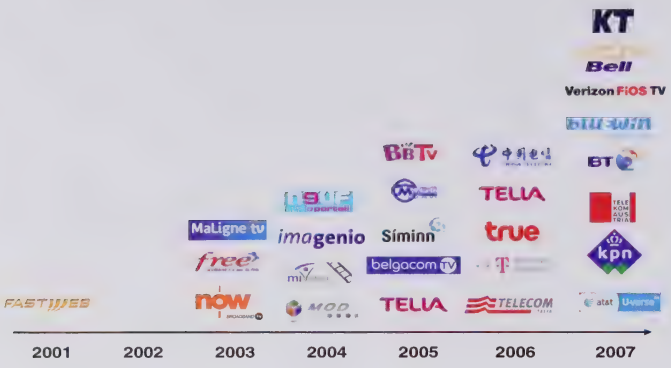


- Customer base of 100k
- Delivers c.1.3m streams per month

Source: Spectrum analysis, Informa, Screendigest, company data

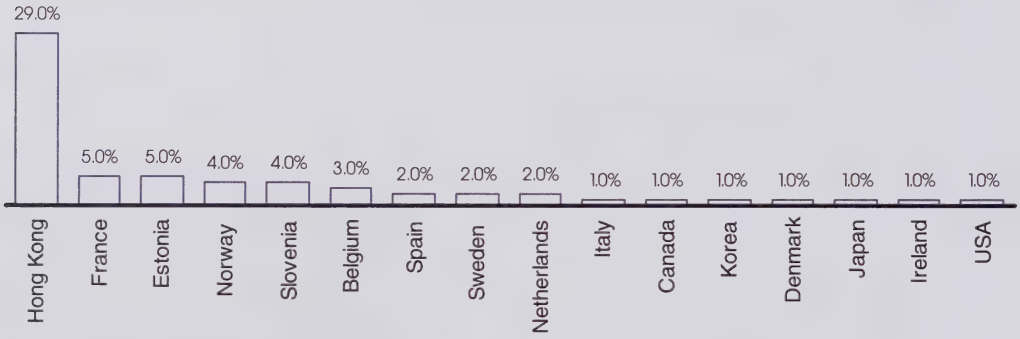
Since the early launch of Fastweb's proposition, increasing numbers of telecom operators have been launching IPTV globally (see Exhibit 41 below).

Exhibit 41: IPTV launches



Despite multiple launches, IPTV uptake across different territories has been minimal to date, as the IPTV proposition is currently constrained by broadband speeds and perhaps also the lack of a compelling consumer proposition.

Exhibit 42: IPTV uptake globally (% of TV households)



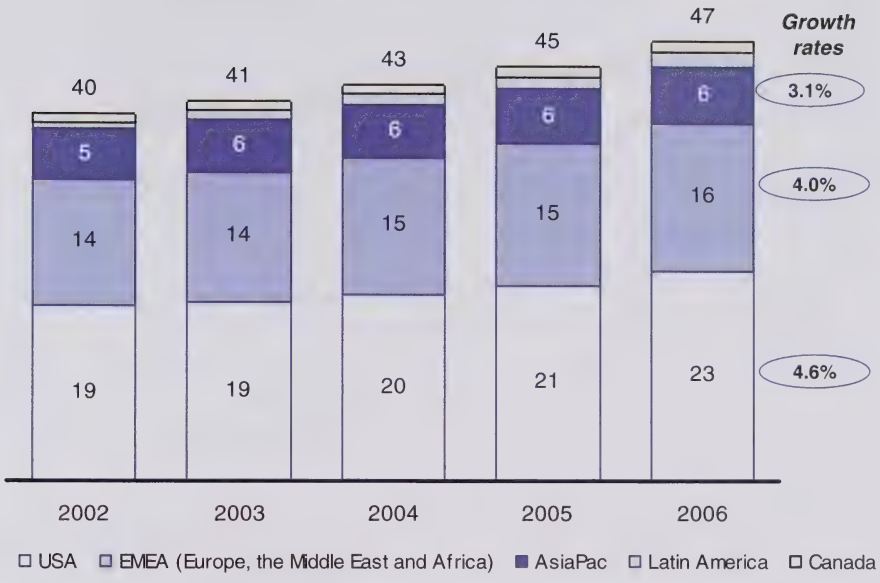
Source: Spectrum / Value Partners analysis; ScreenDigest

The proliferation of broadband, increase of speeds and new consumer propositions including hybrid IPTV/digital set top boxes are likely, however, to mean that broadcasting-like content delivered over the internet may attract larger audiences in the near future. We will discuss Web-TV (i.e. broadcasting-like content delivered to a PC) in the broadband section.

5.5.2 Radio

Radio remains a popular medium, which has managed to maintain growth in an increasingly competitive multi-media market. Global radio revenues were estimated to have reached US$47bn by 2006, up from US$40bn in 2002, representing a 4.6% growth rate (see Exhibit 43).

Exhibit 43: Estimated global radio market revenues (US$ billion)



Source: Spectrum / Value Partners, PWC *Global Entertainment Media Outlook*

Yet there are signs that radio is beginning to be affected by the competitive changes across the market. According to an Ofcom review of media habits in the UK, over the past year, the amount of time spent listening to radio has fallen across all age groups. The reduction appears to be broadly correlated to age. Over the last five years, listening was down by 17.3% among 25-34 year olds. Younger age groups, including children and 15-24 year olds, also fell, by 8.7% and 7.7% respectively. [36]For these groups, trends in alternative and complementary media appears to have had the biggest impact with gaming, music downloads, online video/audio sites (e.g. YouTube) and online social networking sites (e.g. MySpace) providing attractive alternative pursuits.

Some types of radio listening may be resistant to changing consumer habits. Radio is characterised by large peaks in listening in the early morning and drive-time slots, when it is used as 'background' media. This casual, 'lay back' type consumption is quite different from more engaged, consumer-led media control, which the internet can provide. Therefore, this type of consumption is less likely to suffer from the shift of consumers towards more interactive media experiences (see evaluation table below).

[36] The Communications Market Report 2007, Ofcom
http://www.ofcom.org.uk/research/cm/cmr07/radio/rad2.pdf

Exhibit 44: Impact of changing consumption habits by type of listening

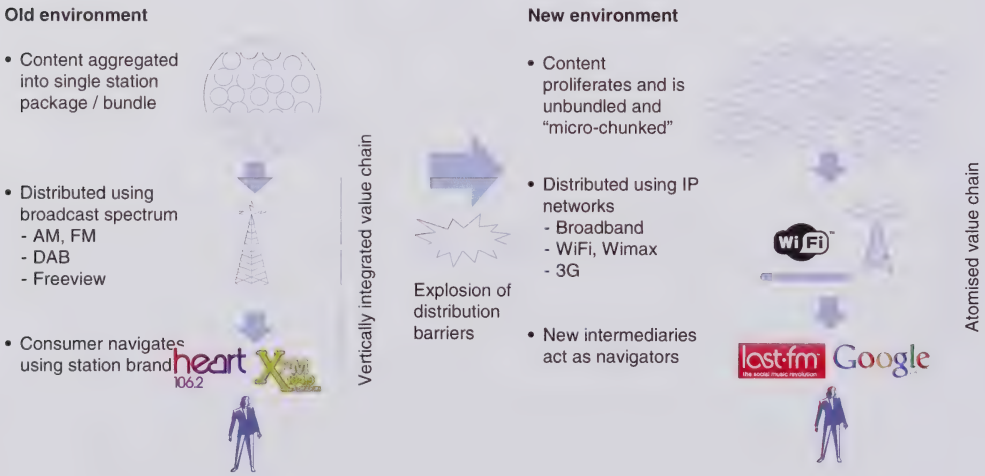
Type of listening		Assessment	Impact
Home	Morning	• Limited impact	◔
	Day time	• Some shift to digital TV/ online	◔
	Evening	• Significant shift to interactive listening	◑
Out of home	Driving	• Some mp3 player usage	◔
	Public transport	• New window based on podcasting	◔
	Work	• New window based on online listening	◔

Source: Spectrum analysis

● High ◑ Medium ○ Low

In many cases, consumption of radio content has not evolved (e.g. listening while driving), so the core broadcast radio 'product' has remained fairly similar over the last 10 years. This is particularly true amongst older audiences. Radio content has mostly kept presenter-led programming, built around local or genre-based station brands, chiefly musical. However, non-regulated online services (e.g. radio streams) are beginning to redefine the radio user-experience and could ultimately lead to more profound changes in the market (see Exhibit 45 below).

Exhibit 45: Shift of dynamics in radio market (Illustrative)



In response to these new trends, radio players are taking a range of actions, of which innovative new approaches to advertising sales and diversification into online seem to dominate (see Case Study below).

Exhibit 46: Case Study: response of UK commercial radio players to the new environment

Player	Approach/ strategy
G Cap	• Diversifying income streams into non-traditional sources (e.g. CD sales, box office) which now account for 14% of income • Initiative to restore the attractiveness of core airtime advertising platform through reducing the hourly minutes of advertising
Chrysalis	• Attempting to increase online incomes with launch of premium podcast services and investment in mobile content and music downloads • Offering advertising packages to clients following merging of Advertising and Sponsorship & Promotion commercial operations
SMG	• Proliferating spin-off stations based on the Virgin brand (e.g. Virgin Classic Rock, Virgin Radio Groove) • Longer term commitment to the radio sector is currently uncertain

Source: Company data, brokers reports, press reports

5.5.3 Broadband

There has been a rapid growth in broadcasting-like content available online via a broadband connection. Content may be downloaded or streamed, and many services offer interactive features absent from traditional broadcast services. 'Online content', whether user-generated or professionally made and distributed, is increasingly moving into what have been traditionally considered print media or broadcasting domains, a move that is mirrored by press, radio and television companies expanding their portfolios online.

Shift of content to broadband

Online technologies enable consumers to access broadcasting-like content in a more participatory and flexible environment. Consumers are able and are increasingly expecting to store, share, create and respond to broadcasting-like content. The release of such broadband standards as ADSL+, WiMax and UMTS[37] has increased the capacity of wired and wireless networks to the point where limits on information transfer are more a question of pricing and infrastructure than of technical capacity.

Broadcasting-like content online, from a few seconds to long features, is now available from a wide range of sources. Sources include content owners or producers who make their content available via the internet, and online aggregators who provide catalogues of video content and online media-sharing communities, featuring both professionally produced content (e.g. clips from TV shows) and user generated content (UGC e.g. clips made by the contributors at home with a webcam).

[37] See glossary of terms in Annex 1 of this report

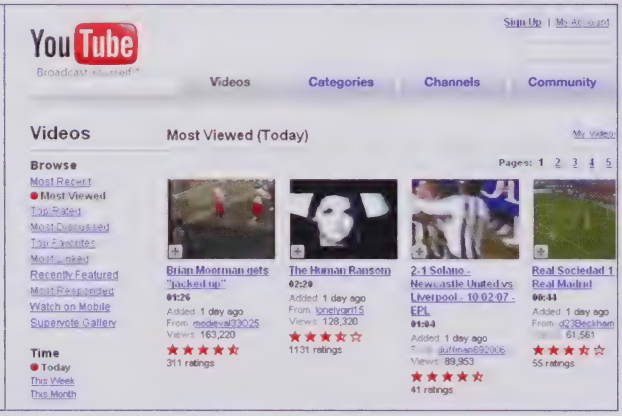
Exhibit 47: Sources of broadcasting-like content online

1 Broadcaster services	• VOD provided by broadcasters or content producers over the public internet, e.g. 4OD
2 Online aggregators	• Provide catalogues of VOD content over the public internet, e.g. Google Video
3 Video communities	• Online media sharing communities with content uploaded by users, e.g. YouTube

Of these new content sources, video communities have gained a strong foothold in the online market-place. This is partly due to the interactive nature of these sites, which allow people not only to watch the content, but to discuss it, vote on it, contribute to it or edit it according to their preferences. A case study below describes the key features of YouTube, the leading global video community, which accounts for 60% of all online video viewing.

Exhibit 48: Case Study: online media sharing community YouTube

- Accounts for 60% of all online video viewing
- 65,000 new videos uploaded every day, including UGC, authorised and unauthorised clips of professional content
- Deals with content owners - CBS, NBC, VH1, Sony Pictures



Current speeds and capped residential broadband packages do not allow end-users to watch full-scale films online, even though such content is available. In the future, however, viewing VOD via internet could increasingly overlap in the consumer experience with the full-scale IPTV and VOD provided by telecom operators via cable or dedicated ADSL.

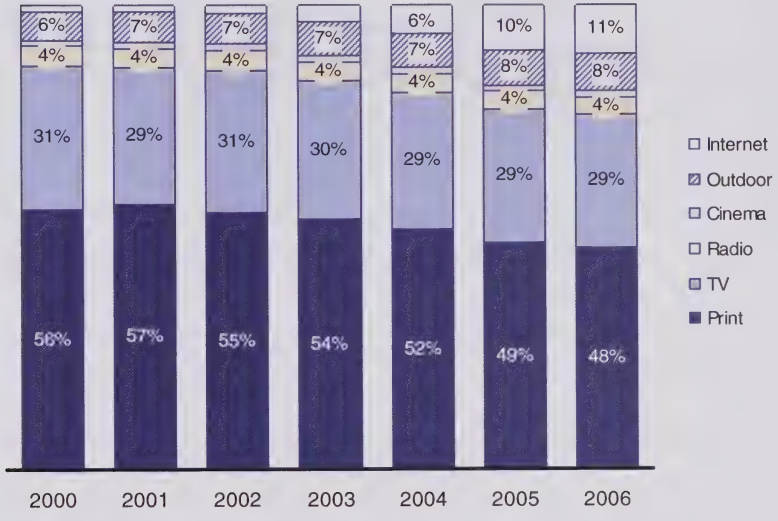
The shift of content, its consumption and sharing to online, therefore raises issues familiar to a broadcast environment including sustainable business models, content

standards, content rights, use of content by the consumer and businesses, and relationships between the users of the content.

Shift of revenues to online

The consumer move to online, encouraged by fast-speed broadband, has also marked a shift in advertising revenues from traditional broadcast and print media onto the internet. In addition, the enhanced interactive capabilities of the platform and a high level of personalisation are particularly attractive for advertisers, resulting in a rapid move of advertising revenues from the more traditional media, such as print and TV, to online (see Exhibit 49 below).

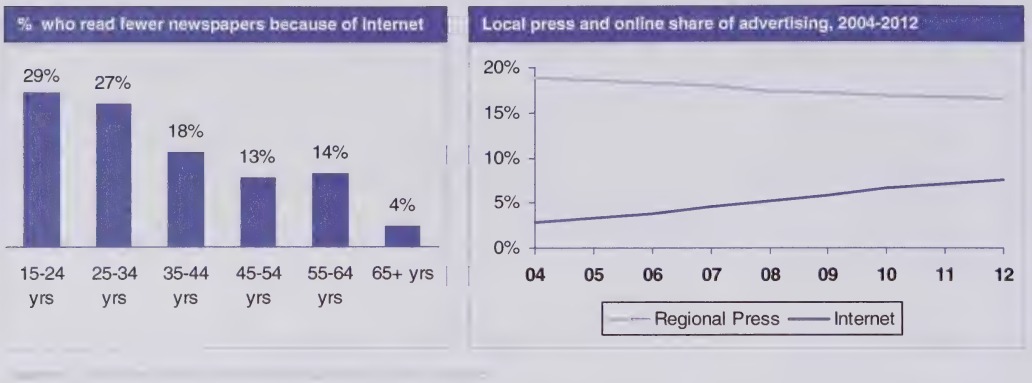
Exhibit 49: UK advertising revenues split (% of revenues)



Source: Spectrum / Value Partners analysis; Zenith

One of the industries where this trend is most evident is local print. Traditionally, local newspapers relied on classified advertising for the majority of their revenues. With the shift of consumers online, so the revenues are leaving local print and migrating to online as well, as the following snapshot from the UK local newspaper industry illustrates.

Exhibit 50: Impact of consumer shift to online for advertising revenues of UK local press



This trend is expected to continue, with online advertising revenues maintaining their growth. However, what consumers will tolerate in the future in terms of advertising, as well as possible issues around personal privacy (with the potential for a backlash from civil liberty lobbyists), means the future value of a more personalised advertising industry remains uncertain.

Globalisation

One other important trend, which is especially prominent in the online market, is globalisation. While in many cases language and technological barriers prevent consumers from reaching or using some sites, in general online content can be accessed worldwide. From the consumer point of view, this presents access and arbitrage opportunities to 'travel' to other countries to access content and services (or prices), previously unavailable. From a commercial perspective, it creates an opportunity to reach a much wider target audience.

The global nature of the internet, however, makes its regulation within specific markets more difficult; for example, making gambling sites illegal in one country can lead to gambling sites being set up outside of the country's physical border, but still available to the consumer. In fact, this is exactly what has happened, leading to some highly publicised cross-border criminal prosecutions.

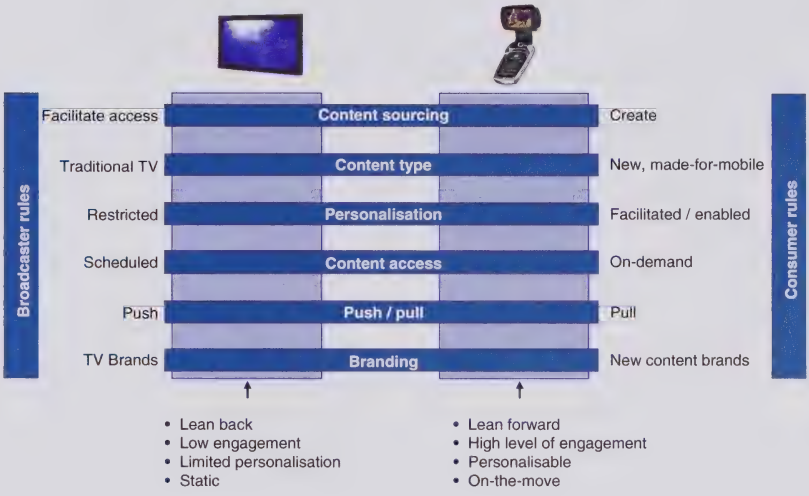
5.5.4 Mobile

Devices and technologies that enable broadcasting-like content to be available on the move are becoming increasingly accessible for consumers. 'Mobile' content, delivered via mobile telephones, Wi-Fi and other wireless services, is gaining popularity amongst certain demographics, particularly the younger and more affluent; a trend that the advertising industry is monitoring keenly.

Broadcasting-like content available on mobile

In the mobile space, development of 3G technology has enabled higher network speeds, capable of delivering broadcast-like content, while more advanced handsets have provided a 'third screen' for consumers (in addition to the TV and PC). Mobile TV, due to its high level of personalisation, engagement and potential for consumption on-the-move, was seen by many operators as an ideally positioned media to attract and retain consumers and revenues (see Exhibit 51 below).

Exhibit 51: Comparison of traditional and mobile TV capabilities [ILLUSTRATIVE]



As a result, a large number of mobile operators have launched mobile TV services, often offering a wide range of purpose-made content for a monthly subscription. The proposition of Sky Mobile TV in the UK is one such example.

Exhibit 52: Sky Mobile TV packages in the UK (2007)

The emergence of mobile TV services has led to the creation of new relationships and services across the market. These new relationships are being forged across the value chain with broadcasters having to reach special agreements with the original content creators, as well as entering partnerships with mobile platforms. At the same time, content creators are seeking new relationships with mobile operators and often aggregators, to ensure the widest possible reach. For example, MTV had to sign a number of content deals with the leading mobile operators to ensure a prominent place on the mobile platform for its content (see case study below).

Exhibit 53: Selected MTV operator deals in the UK (2007)

Operator	Description
vodafone	• Multi-territory agreement with Vodafone Live!
O2	• Partnered with O2 to launch mobile music service on O2 player device
3	• Licensing agreement with 3UK for music news, live footage and music videos
T-Mobile	• Three-year deal for supply of MTV content on t-zones portal

In the UK, several major content providers including Buena Vista and Disney, ITN, BBC and Channel 4 have signed deals with major mobile companies to broadcast content across a mobile platform. However, while mobile TV is widely predicted to be a future competitive hotspot and is attracting significant investment, it generally remains a bandwidth intensive option, has undefined industry standards, high pricing levels, and relatively low service standards.

News and sports clips, music videos/songs, games and 'mobi-sodes' are the only types of content currently gaining any significant number of users. This shorter duration content arguably limits both the creative appeal of content on mobile and the revenue potential, as users are held for a limited period. More generally, the high returns originally expected from mobile TV by its operators have not, as yet, materialised.

At the same time as mobile operators and broadcasters are struggling to ensure high uptake of and returns on their mobile TV services, there may be an opportunity for non-broadcast brands to enter the mobile TV space. Currently in the UK, the most popular channel on Orange UK mobile TV service is a non-TV brand – FHM TV (based on a men's magazine title)[38].

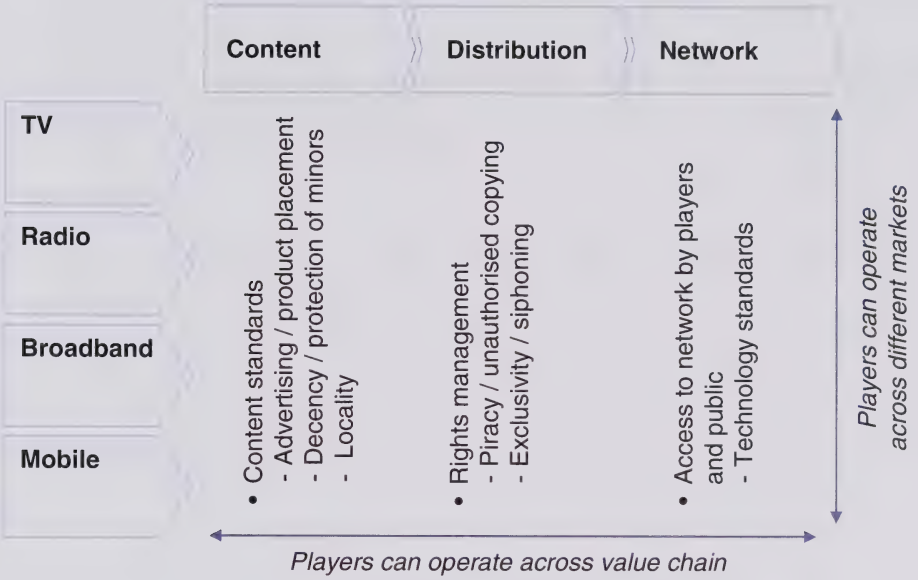
While the future for mobile TV is not clear, its current development raises issues across the value chain including sustainable business models, content standards, mobile content rights and network regulations, which determine providers' and users' access to the platform.

[38] Spectrum research

6 Global regulatory trends

The rapid changes in the media market have caused regulators and policy makers to review and respond to a number of issues across the value chain. These include content standards, rights management, access to networks and competition across markets (see Exhibit 54 below).

Exhibit 54: Types of regulatory issues, raised by changes in the market



6.1 Changes in regulation across value chain

Europe and North America have taken a variety of regulatory approaches to the control and promotion of digital broadcasting and its related markets. This high-level summary focuses on some of the key tools used and their impact on the relevant broadcasting environments to date. In particular, there is a clear trend emerging in co-ordinating the regulation for media and telecommunications through the introduction of a single regulator or extending existing 'traditional broadcasting' regulations to new platforms.

6.1.1 Single Regulator

The creation of a single regulator recognises the market trend towards convergence and the increasingly inter-related nature of the media and telecoms sectors' interests and activities. A single regulator offers a government the potential of making significant efficiency savings by reducing the cost of regulation through the consolidation of a number of agencies. A single regulator also benefits from being able to take a truly cross-market approach to wider issues of both market and public interest, including levels of public service broadcasting and access to network/platforms. A number of markets, such as USA, the UK and Australia, have already adopted a single-regulator approach.

USA

The USA has one of the world's oldest single regulators, the Federal Communications Commission (FCC). The FCC is an independent government agency, directly responsible to Congress. The FCC was established by the Communications Act of 1934 and is charged with regulating interstate and international communications by radio, television, wire, satellite and cable. However, the FCC treats each platform under separate rules, with only minimal content regulation. State laws can also apply to regulate particular issues in the media markets.

The National Telecommunications and Information Administration (NTIA) is the US government's adviser on telecommunications and information policy issues. It manages the *federal* use of spectrum, resolves technical telecommunications issues across the Federal Government and private sectors, and administers infrastructure and public telecommunications facilities grants.

The FCC and NTIA have joint responsibility for radio spectrum management under the US Communications Act. The FCC, with responsibility for commercial spectrum, has tended to operate an increasingly market-based model of allocation, whereas NTIA, responsible for federal spectrum, retains a more traditional bureaucratic assignment system. These antithetical approaches have resulted in poor inter-agency coordination of spectrum allocation, particularly in relation to such 'premium' spectrum as UHF TV and land mobile radio. The two-tier approach more generally risks a higher regulatory burden for broadcasting markets and the potential for conflicting or overlapping requirements. However, a new Memorandum of Agreement, to replace the governing MoU of 1940, was signed in 2003, requiring closer collaboration between the agencies.

Europe

The European Union's regulatory framework for audiovisual policy, the Television Without Frontiers Directive (TVWF)[39], sets some policy principles that must be adopted in member states' domestic legislation as well as some recommended voluntary standards. The majority of European member states have now formed single regulatory authorities for communications and broadcasting, which in accordance with the European guidelines, function as independent bodies.

Whilst in many instances a single-regulator approach is clearly beneficial, there are still distinct variations between the key sectors. The European Commission had maintained a legal distinction between 'broadcasting' ('push') and other media (on-demand or 'pull') services, which many have argued to be a distinction that cannot accommodate full convergence. And, as EU directives were founded in this distinction, this has led to some arguably anomalous treatment of different media platforms. For example, editorial bias in the lightly-regulated press is acceptable, whereas internet-based services are expected to be politically neutral and 'democratic': what happens when a newspaper publishes editorials on its website is unclear. By contrast, radio and television broadcasting continue to be heavily regulated and monitored as to bias and content. This regulatory treatment of

[39] After modernisation of May 2007 also referred to as "Audiovisual Media Services Directive" (AMS)

different broadcasting media must also take into account the likely impact of the extension of any rules on what are essentially still emerging markets, and so the definition of broadcasting remains a key issue for debate amongst stakeholders in the on-going revision to the Television Without Frontiers Directive.

In the UK, the introduction of the Communications Act 2003 and the Office of Communications (Ofcom) Act 2002 co-ordinated regulatory activity for the broadcast and telecommunications sectors in the UK. It established Ofcom as a single regulator, at arms length from government, with responsibilities across television, radio, telecommunications and wireless communications services. Ofcom's duties range from ensuring spectrum efficiency and maintaining plurality of broadcasting provision, through to ensuring universal access of electronic communications services and ensuring the range and quality of TV & Radio services.

Australia

In Australia, the Australian Broadcasting Authority and the Australian Communications Authority were combined to form the Australian Communications and Media Authority (ACMA) on 1 July 2005. ACMA has a closer relationship with government than many of its European counterparts as it is a statutory authority within the federal government portfolio of Broadband, Communications and the Digital Economy (formerly the Department of Communications, Information Technology and the Arts [DCITA]). ACMA's framework is relatively complex, based on four Acts of parliament, 29 statutes and more than 523 legislative instruments[40].

ACMA's responsibilities also extend to the monitoring of internet content, enforcing Australia's anti-spam law and making rules about accessing the internet via premium mobile phone services. Its role in internet censorship has been widely criticised as unnecessary and ineffectual, with more than 80% of its censorship activity concerning sites hosted overseas and over which it has no control[41].

In summary, there is a definite shift across a number of territories to adopt a single regulatory body to govern what is increasingly becoming one marketplace, though only a few leading global markets have implemented this approach up to date.

6.1.2 Promoting Diversity

Diversity, both in terms of the number of market players (or independent 'voices') and of types of content (discussed in more detail later in the report under 'Content'), is the matter that regulators globally have sought to protect and promote. Regulatory tools in support of this include general competition rules, 'anti-siphoning' legislation, spectrum management policy, broadcasting licence commitments such as content quotas (discussed in 'Content section'), content standards regulation and public service broadcasting regimes.

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[40] *The Legal Challenges Facing ACMA as a Regulator*, Chris Chapman (Chair to the AGS Media and Communications Forum), March 2007

[41] *The Future of Media Regulation*, Russell Brown and Steven Price, commissioned by the BSA, May 2006

UK

In the UK, Ofcom plays a prominent role both in spectrum allocation, which is aimed at promoting diverse broadcasting propositions, and in LLU (local loop unbundling), which is aimed at promoting diversity in broadband services. In addition, Ofcom has launched a review of the UK pay-TV industry, being prompted by the allegations from Virgin Media about BSkyB's abuse of its market power in the UK pay-TV market[42].

Europe

Across the European Union, the European Commission is responsible for promoting diversity through effective competition in broadcasting and related markets. In the interests of entrepreneurship, consumer choice and innovation, the EC has promoted the liberalisation of telecommunications and broadcasting sectors in member states as well as more specific interventions to ensure key premium content, such as sport, is not unduly restricted through rights trading.

Europe's regulatory framework is set out in the European Television Without Frontiers directive (TVWF). The directive's scope (see Exhibit 55 below) has recently been redefined in response to market developments.

Exhibit 55: Realm of TVWF directive

The TVWF Directive
Free movement of broadcasting services
Country of origin:
• To ensure development of a single market through reducing barriers
Public interest
Advertising rules:
• To increase viewers' enjoyment from programmes and to protect them from damaging advertising practices
Events of the major importance:
• To ensure that the general public can access events which are considered to be of major importance to society
Protection of minors:
• To protect minors from moral, mental or physical detriment
Right of reply:
• To ensure that natural or legal persons are not unjustly damaged by assertion of incorrect facts in television programmes
Development of European production
EU distribution:
• To encourage distribution of European TV programmes
EU production:
• To encourage production of European TV programmes through introducing production quotas

[42] Virgin Media has recently filed legal proceedings against BSkyB over the removal of the satellite broadcaster's basic channel package from the cable operator's service. It also argues that Sky extracted "onerous" rates for the carriage of Virgin Media TV channels, including Living TV, on Sky's own satellite TV service. Virgin is basing its legal challenge on the Competition Act and article 82 of the EC Treaty, arguing that Sky is abusing its dominant position in the UK pay-TV market.

Originally, TVWF was confined to traditional broadcast media, and focused on analogue linear TV broadcast via terrestrial transmitters, satellite or cable. However, starting in 2003, the EU held consultations to amend the existing TVWF directive, to match the needs of the new marketplace.

The Community reached political agreement regarding amendments to TVWF on 24 May 2007 and the directive must enter into force by the end of 2007. It is supposed to be transposed into the national laws of EU members by the end of 2009.

Canada

In response to concerns about the steep decline in English-language broadcasters' spend on Canadian programming compared to French-language broadcasters, the Canadian Radio-television and Telecommunications Commission (CRTC) has committed to use the licence renewals process to try and address the decline. The CRTC had previously removed spending quotas on the amount of home-grown scripted programming each broadcaster must air in its controversial 1999 Television Policy.

While ensuring diversity in media markets is a common focus for regulators across many territories, there is no unified regulatory approach to the issue. However, regulating through licence allocation is a common solution, as are the content quotas, discussed later in this paper.

6.1.3 Media Ownership

The purpose of media ownership rules is generally to promote competition, diversity of viewpoint, and to ensure the availability of local news and information. In general, legislative controls on media ownership can be divided into two broad categories: specific controls relating to broadcasting alone and generic controls relating to commercial activity and the operation of competition.

In Europe, media ownership rules are largely dealt with at Member State level, but there is an additional legislative layer as the European Commission ensures that national rules do not hinder the functioning of the Internal Market. The acquisition of control of a media entity may fall beyond the scope of Member State rules and into the concentration regime of the EC Merger Regulation (provided it meets certain dimension thresholds).

The Australian regulator ACMA works in close co-operation with the Australian Competition and Consumer Commission (ACCC) to administer the rules on the concentration of ownership within broadcasting sectors, ownership across different media, and foreign ownership. The rules apply to licences for commercial television and radio broadcasting, subscription television broadcasting, international broadcasting, datacasting transmitters and newspapers. These rules set down the minimum number of media operators in each licensing area.

The periodic review of media ownership rules, a standard practice in many overseas legislatures, is currently stimulating debate in Australia on the effectiveness of cross-media rules in a converging, and increasingly global, digital media landscape.

6.2. Changes in Content regulation

With new platforms gaining increasing audience shares, governments and regulatory bodies worldwide realise the need to monitor and regulate content standards across all media platforms (e.g. to ensure protection of minors which previously was only monitored on 'traditional' media). This section examines a number of key initiatives in content regulation.

6.2.1. Extension of existing broadcasting regulations to new platforms

The revised EU Directive, TVWF, means that a number of new players are now affected by the directive and will have to re-align their content strategies. For example, under the new Directive, mobile and broadband providers are responsible for the type of content that users can reach, including protection of minors and identification of commercial content.

Exhibit 56: Obligations and affected players under the new TVWF

Obligations in the new directive

Obligations	Audiovisual content services	
	Linear	Non-linear
Protection of minors	✓	✓
Right of reply	✓	✓
Identification of commercial content	✓	✓
Basic identification of Service Provider	✓	✓
Minimum quotas on European & independent programmes	✓	×
Maximum quotas on advertising	✓	×
Access to the public to events of major importance	✓	×

Players, affected by the directive

	Old TVWF	New TVWF
Broadcasters	✓	✓
Sports rights owners	✓	✓
Fixed operators – cable	✓	✓
Fixed operators – BB/ISP	×	✓
Mobile operators	×	✓
Government / regulators	✓	✓

Source: Spectrum / Value Partners analysis; EC; Ofcom

Online content has experienced strong growth in volume and usage, as a growing number of people spend increasing amounts of time consuming and creating content. Given the growing prominence of the online platform, defining appropriate online content regulation is one of the major challenges in adapting existing regulation to the new media landscape.

The unique characteristics of the internet pose significant regulatory problems. First, the internet is a global medium without nationally defined boundaries and with no central control. Second, the anonymity of the internet makes it difficult to identify offenders and bring them to justice. Finally, unlike traditional broadcast media, internet content can be 'published' by anyone with a computer and internet access. These features make the internet platform relatively easy to use for illegal or inappropriate activities. The regulatory initiatives aimed at addressing these issues include protecting consumers and their civil

liberties, as well as ensuring fair competition and a safe operating landscape for the players (Exhibit 57 summarises these issues).

Exhibit 57: Regulation of online content

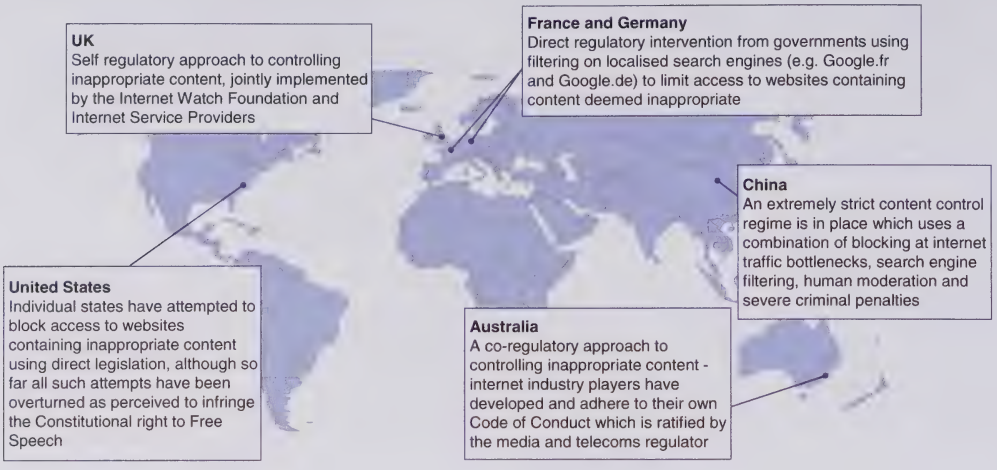
	Description of type of issue	Example of issue
Consumer protection	• Ensuring the internet operates as a safe forum for all users, protecting them from a range of online threats (e.g. illegal content, spam, viruses)	• Identity theft or 'phishing' • Grooming of children
Contravention of civil liberties	• Protecting users' civil liberties in the online environment, ensuring freedom of speech, privacy and freedom of information	• Censored search services in some countries e.g. google.cn
Universal service obligations	• Obligations placed on content providers to add features for equal usage of internet (e.g. for the visually impaired)	• Websites that are inaccessible to visually impaired users
Competition	• Competitive issues arising from positions of power of players in the Internet, that negatively impact the market	• Internet governance issues such as access to domain names • Abuse of dominance in Internet browser
Corporate protection	• Protection of corporates to ensure that confidential and commercially sensitive information remains secure	• Prevention of malicious hacking and sabotage of content (e.g., sensitive information)

There are four core types of approach that could be adopted to regulating online content: direct regulation, co-regulation, self regulation and end-user regulation:

- **Direct regulation:** Where a statutory body is empowered by law to develop its own regulations which it maintains, monitors and enforces;
- **Co-regulation:** Where a body with statutory regulatory authority delegates to the relevant industry the responsibility for maintaining and applying a code of practice that the statutory regulator has approved. The statutory regulator has final responsibility and would expect to oversee the effectiveness of codes of practice and retain powers to intervene where necessary;
- **Self regulation:** Where an industry polices its own operations without reference to any external, controlling back-stop entity;
- **Media literacy / end-user regulation:** Steps taken to inform the end-user about consumer protection issues on the internet or steps taken by the end-user to regulate their own consumption of content.

In reality, regulatory approaches vary significantly between different countries (see Exhibit 58 below). At one end of the scale, the UK has adopted a self-regulatory approach to controlling inappropriate content, jointly implemented by the Internet Watch Foundation and Internet Service Providers. At the other, China has implemented an extremely strict content control regime, which uses a combination of blocking at internet traffic bottlenecks, search engine filtering, human moderation and severe criminal penalties. The middle ground approaches, taken by countries like France and Germany, see governments intervening directly via the use of filters on localised search engines, which limit access to websites with inappropriate content.

Exhibit 58: Examples of regulatory approaches to content regulations


UK
Self regulatory approach to controlling inappropriate content, jointly implemented by the Internet Watch Foundation and Internet Service Providers
France and Germany
Direct regulatory intervention from governments using filtering on localised search engines (e.g. Google.fr and Google.de) to limit access to websites containing content deemed inappropriate
China
An extremely strict content control regime is in place which uses a combination of blocking at internet traffic bottlenecks, search engine filtering, human moderation and severe criminal penalties
United States
Individual states have attempted to block access to websites containing inappropriate content using direct legislation, although so far all such attempts have been overturned as perceived to infringe the Constitutional right to Free Speech
Australia
A co-regulatory approach to controlling inappropriate content - internet industry players have developed and adhere to their own Code of Conduct which is ratified by the media and telecoms regulator

Source: Spectrum / Value Partners analysis

However, each of these approaches has potential flaws.

Primary legislation is difficult to enforce given the global nature of the internet, is potentially costly to administer, and is likely to result in constitutional inconsistencies. Often, strong government intervention can raise opposition by key stakeholders, including the public, if the legislation is perceived as unnecessary censorship or market control.

Self-regulation is implemented by industry players. Its effectiveness and impact may be difficult to monitor objectively and its self-regulatory codes may not have the same force as law, in terms of applicable sanctions.

Finally, end-user regulation often relies on home PC software, which is not always capable of blocking undesirable content and programmes. In addition, while parents are the ones who are anxious to protect their children from unsuitable content, very often children are in fact more internet-savvy than their parents and can succeed in accessing the content, despite blocking programmes or parental warnings.

Consequently, a number of markets have developed multiple approaches to content regulation. For example, in the US, a number of legal acts have been passed designed to ensure protection of minors from harmful content (see Exhibit 59 below).

Exhibit 59: US legal acts, aimed at protection of minors

Law	Description
Communications Decency Act (CDA)	• Title V prohibits communication of 'patently offensive' content to under-18s
Child Online Protection Act (COPA)	• Designed to protect minors from harmful sexual content but has never taken effect
Child Internet Protection Act (CIPA)	• Unlike CDA and COPA, focused on targeting access points where children are primary Internet users • Schools and libraries required to operate 'technology protection measures'
'Dot Kids' Act	• Creates a 'kids.us' domain
'Amber Alert' Act	• Prohibits use of misleading domain names to deceive minors into viewing harmful content

Source: Spectrum / Value Partners analysis

The impact of this package of legislation has, however, been limited: CDA was partially overturned by the Supreme Court; COPA has been totally blocked by the Court, which ruled the law unconstitutional in 2004; and the 'Dot Kids' Act remains controversial.

Consequently, the US has experienced a paradigm shift from primary legislation to the self-regulatory model. For example, at the same time as Congress was attempting to pass the CDA, a new internet protocol for labelling online content was being developed. 'PICS' (the Platform for Internet Content) emerged as a result of collaboration between industry players and end-users and was not a government initiative.

Simultaneously, media literacy has also emerged as a key dimension of the regulatory approach. For example, consumer empowerment technology such as GetNetWise has enhanced consumer awareness about the issues and dangers surrounding usage of internet content.

A number of other countries have also developed a combined regulatory approach to address the issues around online content. In Italy, in late 2003 two government ministries jointly proposed the 'Internet e Minori' self-regulation code, which requires industry players to create and implement self-imposed rules. Despite its close ties with China, Taiwan has rejected the model of outright internet censorship in favour of self-regulation and in November 2004 the Government Information Office (GIO) introduced a content classifications rating system. Australia has developed a co-regulatory approach, whereby the Industry Codes of Practices, developed by the IIA (Internet Industry Association) are policed by the government regulator. This initiative has been far better received by the Australian stakeholders than such primary legislation as the Broadcasting Services Act.

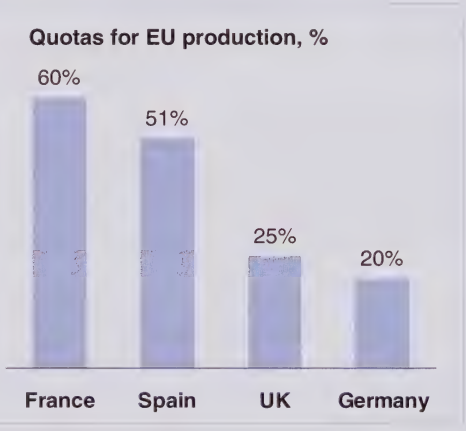
As online content gains prominence, it also raises a number of important regulatory issues, which need to be addressed to ensure safety and a positive consumer experience for online users. However, the experience in a number of markets shows that simply passing 'top down' regulations often proves to be ineffective. To regulate the online place efficiently, users, industry and the regulators need to collaborate in creating a good online environment through a combination of regulation, self-regulation and media literacy initiatives.

6.2.2 Promoting content diversity

In Europe, the TVWF directive ensures the free movement of European programming within the internal market and provides a framework within which a free market in member states can protect independent and local (EU) production (see Exhibit 60 below).

Exhibit 60: TVWF guidelines about independent and European content

- To encourage diversity, EC has introduced quotas for Independent and European production
- **Independent production:** reserve a min of 10% either of transmission time[1] or of programming budget
- **European production:** reserve a proportion of transmission time[1]
  - E.g. EU production to account for min 20%-50% of the transmission hours for channels in different EU countries



Note: (1) Excluding the time devoted to news, sports events, games and advertising
Source: Spectrum analysis, EC

UK

In the UK, Ofcom sets and monitors quotas in local content and genre programming for all free-to-air broadcasters through their licence agreements, but these quotas are proving increasingly challenging and costly for the FTAs to meet. The UK is, therefore, continuing to move away from ex-ante rules to an approach that places the emphasis on the promotion of effective competition in relevant markets and ex-post rulings. This approach includes wider cross-value chain schemes including improving consumer information, removing barriers to entry to the market and reducing consumer switching costs.

Ofcom has, through its review of Public Service Broadcasting, determined that there is a continuing rationale for PSB content in a digital age but that its continuing influence and impact may be significantly under threat, as evidenced in its ongoing reviews of the financial position and futures of existing PSBs. Ofcom has also expressed a renewed commitment to the importance of plurality in its provision in its proposal for a Public

Service Publisher (PSP). The PSP was conceived as a non-commercial, content commissioner which would use the tools, technology, insights and culture of digital media, in both production and distribution, to deliver against public purposes. Its focus would be content that is participative in nature; however, the detail and timing of such a development in the UK market is still under review.

Australia

In Australia, diversity is supported through a number of measures including two public service broadcasters and regulatory tools such as local content quotas and media diversity provisions (on the latter see the preceding section on 'Media Ownership'). Australia also acted to exclude its audiovisual services sector from negotiations under the General Agreement on Trade in Services (GATS - part of the Doha round of trade negotiations) in order to maintain Australia's flexibility to apply policy measures to meet cultural and social objectives for the audiovisual sector. In Australia's more recent free trade agreement negotiated with the US, however, only the local content requirement for existing delivery platforms is quarantined, restricting the application of local content requirements under future technologies. The definition of 'local' content can, however, be problematic. A programme could meet the creative control requirements of ACMA's quota but may still not 'look' or 'feel' Australian[43].

6.2.3. Advertising rules

Advertising revenue plays a critical role in the health of any broadcasting market and so regulation of media advertising is a key instrument of any media regulator. The role of advertising has become more complex in a digital age, expanding far beyond traditional ad breaks with sponsored programming, product placements and 'advertainment' becoming an increasingly important part of the revenue mix. Regulatory responses to this new environment include restrictions on the frequency and length of advertisements, controls on sponsorship and product placement and special protections around harmful products (such as tobacco and alcohol) or for specific audiences (such as children).

Canada

Canada's media regulator has decided to remove restrictions on broadcasters' advertising time limits. The Canadian Radio-television & Telecommunications Commission (CRTC) will remove all restrictions on advertising time limits by 1 September 2009, after gradually increasing the amount of advertising allowed, in a bid to provide broadcasters with additional revenues to respond more effectively to the digital transition.

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[43] Note that since 1999, New Zealand programs have been counted as Australian content, under the Closer Economic Relations Agreement (CER).

Europe

The revised European Television Without Frontiers Directive (now called the Audiovisual Media Services Directive) proposes modernised TV advertising rules, including more flexible rules on inserting advertising between programmes and extending the Directive's remit to include product placement rules. The proposed Directive nonetheless continues to set out a range of advertisement restrictions which must be incorporated into Member States' legislation, such as:

- Sport events can be interrupted only in the pauses foreseen;
- Religious services cannot be interrupted;
- No advertising is permitted for tobacco and medicine that is available only on prescription and advertising of alcohol is restricted.

New features of the proposed Directive include:

- Advertising remains restricted to 12 minutes in any given hour: however, films, current affairs programmes and news cannot be interrupted by adverts more than once for each period of 30 minutes (this compares with a limit of once every 45 minutes for films, and once every 20 minutes for news programmes);
- Children's programmes over 30 minutes may be interrupted by one break in each 30-minute period (during which time minors will also be protected from certain types of adverts, which now also includes unhealthy or "junk food" advertising);
- The qualitative TV advertising rules are extended to on-demand services to increase consumer protection;
- The old TVWF Directive established the principle of separation and the prohibition of "surreptitious advertising" applied to programmes for which broadcasters are responsible.

UK

In the UK, Ofcom has reviewed a number of areas in regards to advertising. One of the most recent initiatives has been the restriction on television advertising of food and drink products that are high in fat, salt and sugar (HFSS), which has been introduced as a response to a growth in childhood obesity in the UK. Following three years of analysis and industry consultations, in February 2007 Ofcom introduced the following restrictions[44]:

- From 1 April 2007, HFSS advertisements are not permitted in or around programmes made for children or programmes that are likely to be of particular appeal to children aged 4-9;
- From 1 January 2008, this rule will be extended to protect the children aged 4-15.

[44] Ofcom, Television Advertising of Food and Drink Products to Children, 22 February 2007

Ofcom has also begun to review whether some participation channels ought to be reclassified either as lottery services or advertising services. The regulator, alongside ICSTIS (the industry-funded self-regulatory body for all premium rate charged telecommunications), has also introduced an emergency code 'designed to restore public trust in the premium-rate participation TV sector'. This follows the admission by several broadcasters and interactive competition service providers that premium rate SMS and dial-in competitions were often misleading viewers and sometimes fraudulent, with, for example, lines remaining open after winners had been picked. However, it remains a grey area as to how such programming should be classified and regulated when its entertainment and advertising elements are so well integrated.

USA

The US does not restrict the broadcasting of commercials, except during children's programming[45]. Advertising aimed at children is dealt with under FCC's Children's Television Act of 1990, which has evolved with time, to recognise the growing role of digital platforms. In a 1993 update, the FCC decided to honour the industry's voluntary guidelines to air no more than 12 minutes per hour of advertising on weekday children's programs and 10.5 minutes per hour for weekend programming. Recognising the impact of digital, the 2004 update of the Act applied the advertising restrictions for children to all digital programming. Finally, in 2006, further reflecting the growing role of the online media, the Act stated that the web pages to which the viewers are directed during children's programmes are not to be used for e-commerce or commercial advertising.

The US market is also witnessing a growth in 'advertainment' programming. NBC and Fox are particularly active in pushing premium-rate sweepstake competitions, while GSN's Playmania and MyNetworkTV's My Games Fever have led the way in the quiz TV market. The US is also relatively unhindered by rules on product placement.

In order to protect audiences from undue surreptitious advertising, many international regulators are trying to control the growth and influence of product placement and sponsorship on their domestic markets. They may, however, be increasingly undermined by the growth of these new revenue streams in the US and the power of US broadcasting content in overseas (particularly English-speaking) markets.

As this section demonstrates, in response to intensifying competition from new media markets and depression of TV advertising revenues, a number of regulators around the world have necessarily had to relax regulatory restrictions on duration and type of TV advertising.

6.2.4. Regulation of HDTV

Typically, HDTV formats have been introduced by TV broadcasters as a mark of differentiation, to improve the performance of their services in increasingly competitive TV markets. In a number of countries HDTV format is 'pushed' by the regulator as the national standard, however. For example, both South Korea and Australia took a

[45]Simon P. Anderson, Regulation of television advertising

regulatory approach to HDTV, rather than leaving it to the market to develop: in both markets, quotas have been set for HDTV broadcast (see table below).

	Regulatory requirements for HD broadcast
South Korea	• Weekly quota for HD content: min 25 hrs • By 2010, all output from the terrestrial networks must be in HD
Australia	• Weekly quota for HD content: 20 hours per week (no more than 15% of archive material can count towards the quota) • The quota became mandatory either from July 2003 or two years after the commencement of digital transmissions in an area – whichever was the later

Source: Spectrum analysis; Zenith, *TV in Asia Pacific*, 2007

Australia

The Australian government imposed an HDTV quota through the Broadcasting Services (Digital Television Standards) Regulations 2000 (an amendment to the Broadcasting Services Act 1992). Metropolitan TV broadcasters were required to commence digital transmission in 2001, with staged implementation across the rest of Australia by 2005 to a quota of 1,040 hours per annum. Public broadcasters have exceeded the quota requirement, but more than half of commercial broadcasters have not.

Australia's HDTV quota has required significant investment and operational costs for TV broadcasters and distributors, a resource demand exacerbated by the need to simulcast both analogue and digital (SD or HD) during the digital transition 2001-2008. But the HDTV quota and extended simulcast period have also resulted in a spectrum scarcity that has impeded new entrants to the market, and assured the incumbents' dominant position.

The return, in terms of consumer take-up of HDTV has also been persistently low, perhaps owing to the continuing high cost and scarcity of HDTV receivers, the lower cost and abundance of standard definition (SD) TV equipment, and an absence of new and interesting content on HDTV. It therefore has been argued by some that the Australian HDTV quota has had a perverse effect on Australian broadcasting markets, restricting broadcasters from responding effectively to consumer preferences and not ensuring optimal spectrum efficiency in the interests of the country's broader digital objectives.[46]

Europe

In the European Union, regulators and consumers have generally been more focused on multichannel broadcasting, spectrum efficiency and the EU-mandated switch from analogue to digital over-the-air ('terrestrial') TV services, than any European level push toward HD services. The shift from cathode-ray tube TVs to flat-panel LCD, plasma and widescreen displays is also to a certain extent overshadowing any transition to HD

[46] See Australian Competition and Consumer Commission's submission to the Department of Communications, Information Technology and the Arts, June 2005 and ACMA website, http://www.acma.gov.au

amongst consumers and content providers. However, the sales of HD-ready TV sets/receivers is growing, with manufacturers investing significant sums in their marketing campaigns for HDTV equipment and an increasing number of European producers and broadcasters, including the BBC, cable firm Telewest and Sky, offering HD services to consumers.

Therefore, while some regulators felt that they would elevate their country to the forefront of the global developments by introducing regulations on HDTV content, these measures have not always been successful and may have even had a perverse effect on the wider market. The preference of most overseas regulators has therefore been to leave the development of HDTV services to the market.

6.3. Changes in Distribution regulation

With new distribution platforms gaining prominence in the market, regulators across the world have had to review distribution regulations, to ensure the effective operation of competition in the provision of media services irrespective of distribution technology used. At the same time, many regulators have also acted to protect public interest rights, for example in protecting access to certain content (e.g. access to events of public interest or to PSB content). Finally, regulators have sought to protect industry players from the damaging effect that some developing consumer habits can have on them (e.g. piracy issues and content sharing).

6.3.1. Content access across delivery platforms

To protect consumer interests, a number of countries have developed regulations to ensure that consumers can access key channels, such as FTAs and PSBs, and events of major importance in their territory.

European examples of such regulations include 'must-carry' rules and regulation of access to 'events of major importance' under the TVWF.

Must-carry regulations

Must-carry rules intervene in the market to ensure universality of access or at least the reasonable availability of core channels, particularly those which have a remit to create public value (the PSBs). It also ensures that those channels which may not be of sufficient commercial interest on any given platform are still available to consumers.

Across Europe, cable and satellite platform operators are often obliged to carry FTA and PSB channels on their networks through 'must-carry' regulations. In most cases, as illustrated below, the channels that operators are required to carry include both public and private free-to-Air (FTA) channels.

Exhibit 61: Must carry regulations in Europe

Type of channels outlined in the 'must-carry' regulations in key European geographies						
Channels	**Netherlands**	**Spain**	**UK**	**Germany**	**France**	**Belgium**
National Public	✓	✓	✓	✓	✓	✓
National Private	×	✓	✓	can be included by local regulator	✓	✓
Local Public	✓	✓	✓	✓	✓	✓

In most cases, 'must-carry' regulations are applied at the national level, though there are exceptions (e.g. in Belgium, the must-carry rules are developed by regional authorities, separately for Flanders, Wallonia and Brussels; in Germany, must-carry regulations are developed at the state (Länder), rather than Federal level).

Currently, 'must-carry' regulations in Europe vary by country, as the Universal Service Directive recognises the ability of Member States to impose or maintain reasonable must-carry rules on network providers under their jurisdiction. However, there is some discussion on whether these rules could be harmonised in the future.

Events of major importance

To ensure that the general public can access events which are considered to be of major importance to society, the EU has introduced the concept of 'events of major importance' into its TVWF regulation. The EC's regulation of such events, which are specified by each member state individually, limits broadcasters' acquisition of exclusive rights and ensures third parties can access exclusive broadcasts for information purposes.

The Directive lays down framework conditions in which the public may be guaranteed free access to the broadcasts of major events (e.g. a Football World Cup final or the inauguration of a new king or queen). Each Member State is entitled to draw up a list of events which are seen as being of major importance for society. These events must be broadcast unencrypted even if exclusive rights have been bought by pay-television stations. It is, however, the responsibility of each Member State to ensure within the framework of their legislation that the EC directive is observed.

While the latest review of TVWF, touched upon earlier in the report, does not change the provision regarding events of major importance introduced in 1997, it adds, in the name of the right to information, a new right for broadcasters. As from 2007, all broadcasters will have free access to short highlights (i.e. under 90 seconds) of major events for broadcasting in their news bulletins, which they will be able to pick from the transmitting broadcaster's signal with due reference to the source.

Across member state markets, it appears to be a common trend amongst regulators to put in place legislation which ensures that vital information can be accessed by all consumers. These regulations are sometimes enhanced, as the level of competition and number of conditional or proprietary access platforms increases.

6.3.2. Digital Rights Management

Digital Rights Management (DRM) poses questions on the fairness and democracy of intellectual property systems in a digital age. Digital broadcasting creates two broad new challenges in terms of effective rights management: first, assessing the value of rights for content which can be exploited across new platforms and for an extended period of time; and second, managing users' ability to copy, share and edit content that is protected by copyright.

Currently, regulators are often reluctant to intervene in the emerging DRM landscape. For example, setting inter-operability standards would enable consumers to access content on any type of device. However, the recent French attempt to force inter-operability was strongly criticised by US legislators and amongst EU states was only supported by Denmark. In the UK, the All-Party Parliamentary Internet Group recently (June 2006) issued a report in which it concluded that regulatory intervention was not appropriate:

> It is not appropriate for legislators to pick standards, and although inter-operability is clearly desirable, we see no value in bringing forward measures at the current time to require it.

Regulatory 'top-down' legislation is, however, only one of the possible approaches to solving DRM issues. As in the case of internet regulations, collaboration amongst consumers, industry and the regulator could bring considerable results. For example, some significant media players have moved to protecting their copyright more aggressively: Viacom has brought a $1 billion US dollar lawsuit against YouTube (owned by Google).

On the other hand, some media players are prepared to waive their DRM as a means to build interest in their product. For example, artists such as Arctic Monkeys and Sandi Thom have built substantial fan bases through allowing free initial downloads and the use of 'Creative Commons' licences[47]. These licences allow content creators to mark their creative work with the freedoms they want it to carry, rather than a blanket protection which may not be in the greater interests of the creator or users. Some policy-makers are focusing on the need to develop consumers' understanding of copyright/intellectual property limits, to limit the devaluation of creative content through piracy and other rights abuses.

Often DRM protection, adopted by regulators and industry players, proves inefficient if the end-user is uncooperative. There also clearly exists a proportion of users, particularly on the internet who, fully cognisant of the legal limits, are actively seeking to 'get round' restrictions imposed by DRM. For example, in April 2006, users of a popular UGC news

[47] For further information on Creative Commons licenses worldwide see: http://creativecommons.org/worldwide/

website, Digg.com, swamped the site with stories featuring a code that can be used to crack copy protection on high-definition video discs. The action came in response to Digg's administrators deleting stories with the key after demands by the Advanced Access Content System, a consortium of computer and entertainment companies including Microsoft, Intel, IBM and Walt Disney, that manages licensing for high-definition copy protection.

The overriding regulatory approach to the DRM issues seems to be as non-interventionist as possible. This could be partly influenced by the fact that consumers may have a limited tolerance for some DRM restraints: for example, a requirement to purchase the same content several times for use on different personal media devices, when the experience is broadly the same with no distinguishing functionalities, seems unpalatable to many consumers.

6.3.3. Illegal Online activities

Malicious computer activity does not stop at producing or distributing illegal or damaging content. Often, regulation of the online market is also aiming to protect users and companies from hacking (i.e. the targeting of a specific PC) and 'malware' (i.e. the infection of random targets with viruses, worms and Trojan horses).

A number of developed countries have adopted primary legislation to tackle hacking / malware attacks. For example, the US introduced a number of laws such as the National Information and Infrastructure Protection Act and the Cyber Security Enhancement Act, to protect the consumer from attacks on their PCs.

There are, however, significant limitations to the legislative approach. First, regulatory action can normally take place only after attacks have occurred. Second, prosecution is difficult, as there are problems of collecting evidence and proving malicious intent, as well as prosecuting offenders who are located beyond the reach of domestic legislation.

Therefore, in addition to domestic legislation, successful regulation of malicious computer activity also relies on a complementary international legislative framework (e.g. Council of Europe's Convention on Cyber-crime) and trans-national cooperation between law enforcement agencies.

There is also a growing shift towards self-regulation, where a significant part is played by government-run media literacy initiatives, such as various Home Office initiatives in the UK (e.g. Get Safe Online and IT Safe).

Overall, successful international approaches have been mostly based on industry and user collaboration to prevent online malicious activity, together with the regulator ensuring that the necessary protective mechanisms are in place.

6.4. Changes in Network regulation

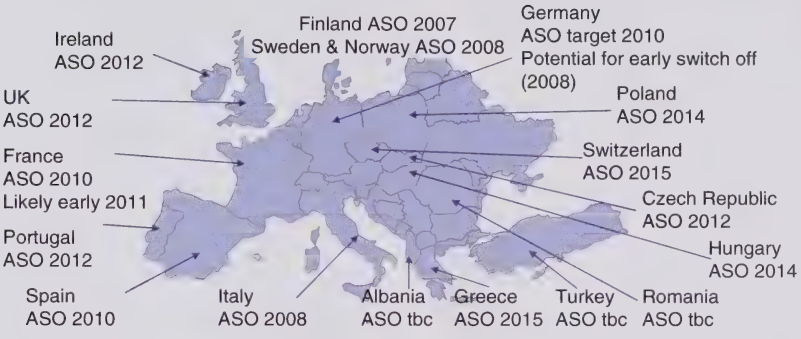
With the development of multiple access technologies and other network evolution, governments have had to deal with a range of questions, from setting up technical equipment standards for the new platforms to re-allocating freed-up spectrum after

Analogue Switch-Off (ASO). The most significant case studies of different regulatory approaches worldwide to Network issues are detailed in the following section.

6.4.1 Post-ASO spectrum allocation

Analogue Switch-Off (ASO) is imminent across key European markets, with the Netherlands having already completed its transition and Finland expected to complete its ASO in 2007 (see Exhibit 62 below).

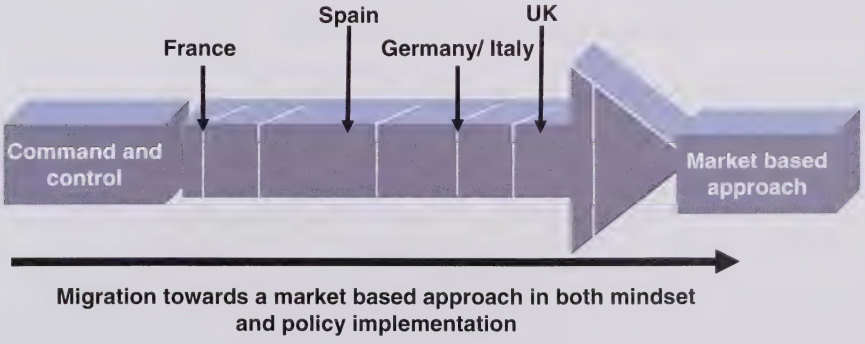
Exhibit 62: ASO dates across Europe



As the analogue signal is switched off, some spectrum will become available. This freed-up spectrum or 'digital dividend' is a scarce and valuable resource in many countries and is already being hotly contested for, by a number of industry players, from broadcasters to mobile operators. While broadcasters are likely to use spectrum for launching and expanding HDTV and multichannel services, mobile operators would use additional capacity for mobile TV or data service expansion.

Some European regulators have already outlined their approach to allocating the new spectrum capacity, which ranges from a market-based competition in the UK to regulatory allocation of the spectrum in Spain and possibly France (see Exhibit 63 below).

Exhibit 63: Regulatory approach to allocating spectrum post-ASO [ILLUSTRATIVE]



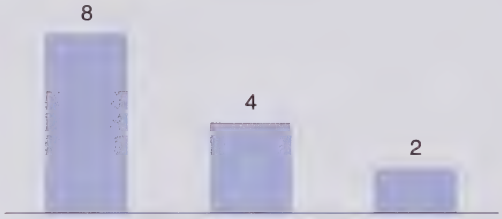
In the UK, Ofcom has stated that it favours a market-based auction where operators will have to compete to obtain spectrum. There is, however, growing concern amongst the free-to-air broadcasters in the UK about Ofcom's proposals[48]. The UK FTAs argue that the proposed spectrum auction may mean that the FTAs will be unable to compete with pay TV providers for the required spectrum. FTA services will therefore be limited in comparison to pay TV. In particular, they believe they risk being unable to provide free, access-to-all HD services after digital switchover in 2012; so HDTV will become a pay/subscription option only.

It is likely that, even if broadcasters adopt new video compression technologies, the digital dividend from switchover (ASO) and a spectrum auction approach will allow terrestrial broadcasters in the UK to offer only a few HDTV services (see Exhibit 64 below).

Exhibit 64: Possible usage the Digital Dividend spectrum in the UK: SD vs. HDTV

HDTV requirements

- In the UK, digital switch over is expected to release 112MHz, equivalent to four multiplexes
- Each national DTT mux can hold up to
  - eight SD broadcast channels per mux
  - two MPEG 2 HD channels per mux
  - or four MPEG 4 HD channels per mux
- Therefore in theory, almost all of Digital Dividend in the UK *could* be required to deliver just 8 HD channels



	SD	HD (MPEG4)	HD (MPEG 2)
Total channels on 112MHz:	24	16	8

Source: Spectrum analysis

In contrast, Germany and Spain are likely to take a more centralist approach. In Germany, it is expected that the DTT frequencies will be allocated by the Federal Network Agency after a tendering process. In Spain, UHF spectrum has been already allocated to DTT and one multiplex has been reserved for mobile TV. Finally, the French CSA is expected to establish a working group to look into allocation of frequencies.

6.4.2. Technical and equipment standards

Closely linked to bandwidth and spectrum availability is an issue of technical and equipment standards.

For DTT platforms, almost all current digital FTA services employ MPEG2 coding technology. In the past, governments and / or broadcasters have chosen this format, attracted by the availability and affordable price of MPEG2 set-top boxes (STBs). However, MPEG2 provides significantly less efficient usage of spectrum, which becomes

[48] See responses to Ofcom's consultation on the Digital Dividend Review recommendation, www.ofcom.org.uk

an important issue with channel proliferation and the introduction spectrum-hungry HDTV services.

As a result, an increasing number of regulators, governments and broadcasters are considering and adopting the MPEG 4 format for DTT services. Countries, which are only now introducing DTT (e.g. Estonia, Lithuania or Ukraine) or are launching new DTT services (e.g. France for Pay-DTT) are looking to benefit from selecting MPEG4 from the start.

Currently, players in nearly 30 countries in the world are moving towards the MPEG4 format (see Exhibit 65 below).

Exhibit 65: Countries, adopting MPEG4 format for DTT

Select MPEG 4 standard	Trials	Launch plan	Launched
• Spain • Poland • UK Pay-TV • Belgium (Wallonia) • Slovenia	• UK FTA • Ireland • Czech Republic • Croatia • Portugal	• Sweden • Norway • Malaysia • Brazil • France FTA HD • Taiwan • Ukraine	• France Pay-TV • Estonia • Lithuania

Source: Spectrum analysis; DVB; ST; Digitag

To ensure successful transition to the new coding standard, some governments (e.g. in France and Brazil) have passed regulations to require digital devices, made available to the consumer by the manufacturers, must be capable of receiving MPEG4 programming. In addition to compatibility with MPEG4 format, the French Government included obligations on the manufacturers to ensure compatibility of CPE (consumer premises equipment) with the HDTV standard, so that early DTT adopters would not be penalised by having to upgrade in the near future. According to the recent French regulation, by December 2008 all built-in DTT tuners must be MPEG4 HD compatible.

Despite these initiatives in France, the predominant trend in Europe is to refrain from imposing regulations on HDTV-ready equipment[49]. For example, Ofcom in the UK has clearly stated its belief that a regulator should not endorse any particular technology or application in its allocation of spectrum or through regulation of STBs, as this is a matter on which the market is best placed to decide. Regulation of technology standards can raise concerns amongst industry stakeholders: e.g., the French TV manufacturers fear that MPEG4 HD chipsets are still too expensive to allow sustainable production and sales of the new DTT tuners, as required by the French regulator.

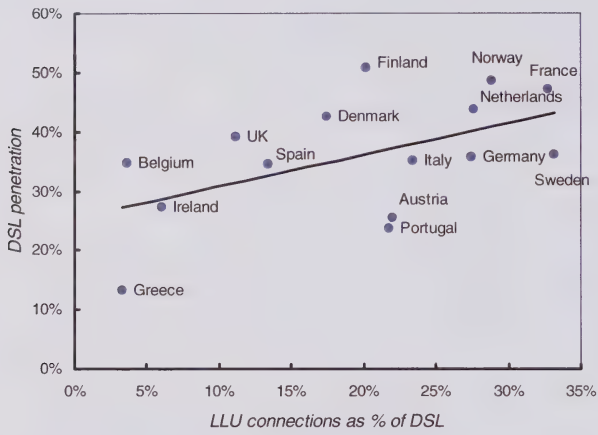
[49] HDTV-content regulations are discussed in the 'Content' section above.

6.4.3. Access to telecommunications networks

With broadband increasingly performing as a media distribution platform, regulation of broadband access becomes relevant in terms of media market regulations. The key regulatory initiatives concerning broadband access are introduction of LLU (local loop unbundling) and unrestricted bitstream unbundling (naked DSL) which could facilitate viewers' access to online content, including Web TV and IPTV.

The table below illustrates that the introduction of LLU tends to boost broadband penetration, as its introduction fuels competition in the market, resulting in an improved consumer proposition and reduced prices.

Exhibit 66: Ratio of Broadband to LLU penetration



Source: Spectrum / Value Partners analysis; ScreenDigest; Analysis

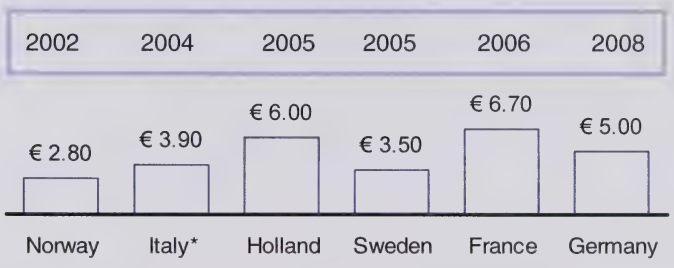
The introduction of LLU is, however, a complex process, requiring incumbents to allow access to their premises and competitors to make significant investment commitments. In all markets, the decision to introduce LLU was followed by a long process of negotiation and arbitration over the commercial and operational conditions of LLU and the subsequent implementation of LLU has been a cause of constant dispute between incumbents and their wholesale / access customers.

Naked DSL, an end-to-end broadband-only connectivity product for service providers, is a relatively new product. Therefore, its impact on the players across Europe has so far been minimal. However, it has been argued by a number of players[50] that the introduction of Naked DSL, if competitively priced, could boost uptake of broadband by lowering the price for those consumers who do not need legacy fixed voice[51] services.

[50] Mainly Internet Service Providers (ISP) and Voice-over-Internet Protocol (VoIP) providers (Spectrum research)
[51] Currently, a consumer, who needs DSL broadband, has to pay for fixed line rental, including the voice element, even if the consumer does not use the fixed phone. NDSL would allow the consumer to pay for data only, catering for the growing segment of mobile-only users.

In the countries that have introduced Naked DSL, the savings to the consumer from taking broadband only, rather than a 'broadband + fixed line rental' package, range from €2.80 to €6.70 per month (see Exhibit 67 below).

Exhibit 67: Monthly savings to consumer from introduction of naked DSL (€)



Note: * In Italy the regulated full price for NDSL is under review
Source: Spectrum analysis

Overall, telecommunications and joint media regulators appear to take a positive stance on the introduction of LLU, thereby promoting consumer choice and competition in the broadband market. Naked DSL tends to be less of an issue, as the overall impact on the industry and the consumer is not yet certain. However, a number of industry players (e.g. VoIP providers, Mobile operators) are carrying out lobbying activities to enhance the importance of this issue in regulators' eyes[52].

7. Prospects and scenarios for broadcasting in New Zealand in a multi-platform converged future

This chapter summarises the regulatory tools used in New Zealand and overseas to effect change across the broadcasting value chain. This summary provides a backdrop to a scenario analysis, which analyses the relative risk and likely impact of future market trends on New Zealand's broadcasting and telecommunications environment.

7.1 Impact of the key trends on the New Zealand media market

As outlined in the previous chapter, there has been a range of regulatory responses across the world to changes in consumer habits, technologies and market trends. Regulatory approaches have been developed to address both macro-trends across the value chain, and specific issues within content, distribution or network.

The table below summarises the most important of these changes and the regulatory approaches taken across the world. It then compares the global trends to the current situation in New Zealand. A more detailed analysis of the major issues in New Zealand, as highlighted by the scenario analysis, and the relevance of international regulatory

[52] Spectrum study on Naked DSL

approaches will be made in the final chapter, 'Determining the regulatory issues for consideration'.

Exhibit 68: Key changes in the international broadcasting regulation vs. situation in New Zealand

Area of change	Main regulatory developments globally	Situation in New Zealand
Regulation across value chain	Increasing number of countries adopting a **single regulator** to govern converging media markets	New Zealand's telecommunications and media sectors are regulated through a range of legacy legislative provisions and by a variety of agencies
	Regulatory approaches to **promoting diversity** differs, but imposing quotas on some types of production and regulating through licensing are common approaches	No mandatory quotas in place (some self regulatory quotas on local quota amongst FTA) and no broadcasting licences - only spectrum licences
	Rules on media ownership has not been universally revised, thought single regulators carry out these revisions periodically	Effectively de-regulated since the late 1980s - few, key players, Australian owned and so may be vulnerable to changes as a result of current reviews of media ownership in Australia
Content regulation	Regulators increasingly **extend existing broadcasting regulations to new platforms** to ensure level playing field	Legislation currently distinguishes content regulation by platform - e.g. traditional broadcast subject to more rules than if transmitted via IP
	TV **advertising rules** are often relaxed to enable traditional TV players retain their growth in increasingly competitive markets	Limited ad rules in NZ – restrictions based around harm (e.g. alcohol), political bias (e.g. election campaigning rules) and only restrictions on timing are Sunday mornings). Regulated by the Advertising Standards Authority
	Typically, there is no **regulation of HDTV** content; the countries which have done so have not always succeeded in growing their HDTV market	No rules on technical standards
	Regulating **online content** has been a high priority for a number of regulators, but the best results were achieved from a mixture of 'top-down' regulation and 'bottom-up' self-regulation	Subject to common and criminal law; ASA rules on advertising if hosted in NZ, and some self regulation (press websites)
Distribution regulation	**Availability of content across delivery platforms** has been regulated where content is of major public value to the audience through mechanisms like 'must-carry' and 'events of major importance'	Exception of 'must-carry' type rule in Copyright Act for cable providers but this is currently under review; no anti-siphoning legislation or other protection on rights of events of national significance
	Typically, regulators do not get involved in **DRM**, leaving it to industry players and technology providers	The proposed Copyright Act Amendment may provide for statutory protection of DRM (referred to as Technical Protection Measures in the draft)
	Illegal online activities are normally regulated through a mixture of industry initiatives and regulatory framework; ensuring media literacy of the consumer is also important	See above - online content subject to common and criminal law in so far as they are subject to NZ law. Broadcasting Standards Authority does not have a role on-line
Network regulation	There has not been a unified **approach to post-ASO spectrum allocation**, though a number of regulators have started examining their options already	ASO date is not finalised, but is likely to take place c.2015; no current plans for post-ASO spectrum allocation
	Technical and equipment standards are increasingly regulated to ensure encoding efficiency (e.g. MPEG 2 vs. MPEG 4), but HDTV standards have been predominantly left to the market to define	No proposals on tech standards
	Access to telecommunications networks is strictly regulated by government worldwide to ensure fair competition and consumer benefits	Access is generally regulated by the Telecommunications Commissioner within the Commerce Commission. There are also a number of initiatives currently underway (e.g. Local Loop Unbundling and operational separation) aimed at improving access

7.2 Potential scenarios for the New Zealand media market

Previous chapters provided an overview of the New Zealand broadcasting and telecommunications landscape, and some examples of how key international media trends in consumer behaviour, technology development and government policy are evolving.

However, numerous uncertainties persist around the scale and speed of these changes, both in international markets and at home.

The Ministry for Culture and Heritage (MCH) and the Ministry for Economic Development (MED) employed a scenario analysis to provide a theoretical framework in which to assess the likelihood and risk of certain outcomes across the value chain. The analysis creates four potential scenarios for the New Zealand media market, based around differing levels of service diversity, availability and consumer control and concludes by highlighting eight key risks for the future.

7.2.1. Approach to Scenario Analysis

The UK Department of Culture, Media and Sport (DCMS) commissioned the former Ofcom Partner, Robin Foster to produce a report on the UK Broadcasting Regulatory environment[53]. The report was aimed at stimulating debate on the key risks and opportunities of digital broadcasting in the UK.

New Zealand's markets differ from the UK in many respects, including in size, structure and in stage of development. However, the combination of workshop discussions, desk based research and analysis and, expert views carried out in the course of this review indicated that similar scenarios to those in the Foster Report could be applicable and useful in the analysis of the role of regulation and policy in New Zealand.

The workshop discussions with policy makers in the co-sponsor Ministries (MCH and MED) identified some developments that were considered to be very likely or certain to occur, such as mainstream access to multi-channel, digital TV. The group subsequently explored some eventualities or events that may be less likely to occur but would nonetheless have a high impact on the public and/or related markets and began to construct a theoretical framework, establishing four possible scenarios, against which the researchers could assess the key issues and potential role of regulation and policy.

The researchers then sought expert views from key players in the industry, including the major New Zealand broadcasters and telecommunication companies, to inform the theoretical framework and the subsequent emerging priorities.

Stakeholders were all asked a list of broad questions on their views on the key priorities and risks for the next 5-10 years, and to respond to any issues that they considered relevant within the three main points of the broadcasting value chain: content, distribution and networks.

The information provided by these stakeholders was not intended as a substitute for a full stakeholder consultation (this is proposed to take place at the next stage in the project), but was simply conducted to provide useful new perspectives and additional information on the likely key developments in the broadcasting, telecoms and related markets.

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53 Foster, Robin, *Future Broadcasting Regulation,* DCMS January 2007

The approach taken in this report is not a full scenario analysis, which would typically be conducted over an extended period of time with a broad engagement of stakeholders. Instead, this 'snapshot' view of scenarios provides a framework within which immediate and more long-term issues might be exposed and their relative risk assessed.

It should also be noted that the scenarios are not designed to be in any way a prediction of future outcomes but rather, to create a theoretical framework within which an analysis of the possible role of regulation and policy may take place.

7.2.2. The Scenarios

Foster focused on technology, media consumption, content and market variables; assuming that economic growth in the UK was likely to be relatively stable and that there would be no radical change in what society expected from its media sector.

Market and consumer supply and demand are also critical variants for New Zealand. However, the additional incorporation of social and economic trends in the analysis reflects New Zealand's differing economic and social circumstances - its size, distance from other markets and unique public service broadcasting model.

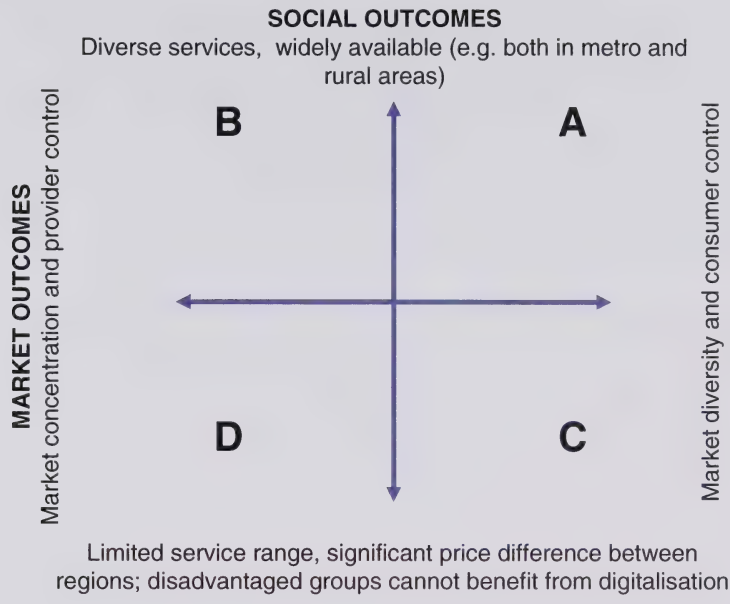
There is also a clear distinction between the nature of the regulatory environments in the UK and NZ. Since the de-regulatory reforms in the 1990s, New Zealand's broadcasting markets have been subject to relatively light regulatory burdens. By contrast, Europe is presently focused on striking the balance between current levels of regulation and a more light touch, market-driven approach. However, questions around how to ensure the markets deliver in sufficient quantity, quality and diversity in the interests of citizens remain pertinent to both Europe and New Zealand.

The researchers considered the likelihood and impact of key eventualities and events in New Zealand within a 5 to 10 year time period. This is intended as a broad timeframe but it was generally considered that any period longer than this would create too many uncertainties within which to conduct a robust analysis, and any shorter period would be unhelpful in postulating what elements might support a relatively 'future-proof' regulatory and policy framework.

In developing the scenarios, it was assumed that a core objective of current 'digital' policy is to facilitate the growth of a cohesive, digitally literate and prosperous society. This will require the widespread availability of digital content and services to all members of society on broadly similar terms.

As the other axis, a variable based on market outcomes was developed, providing a spectrum between a reality of concentrated markets, proprietary systems and a reality of market diversity and empowered consumers.

Exhibit 69: Framework for the scenarios


SOCIAL OUTCOMES
Diverse services, widely available (e.g. both in metro and rural areas)
B
A
D
C
MARKET OUTCOMES
Market concentration and provider control
Market diversity and consumer control
Limited service range, significant price difference between regions; disadvantaged groups cannot benefit from digitalisation

The four scenarios created by these axes demonstrate the range and combination of market permutations and characteristics within which desirable outcomes and the potential role for regulatory intervention was assessed.

Scenario A – 'Diversity': reflects a world with universal geographical penetration by all digital platforms, supported by high levels of digital use and literacy. Digital AV content is accessible on a technology and device neutral basis, with full interoperability across platforms and at an affordable price. All services are content driven, and there is an effective content market, competing on quality and diversity of interest.

The strength of plural, effective broadcasting and telecommunications markets in the 'diversity' scenario supports a strong presence for local content that meets the needs of diverse social and cultural groups. News and information sources are diverse, accurate, balanced and relevant. There is widespread participation in democratic digital forums. This scenario assumes Analogue Switch-Off has occurred and there is significant and sustainable economic growth in the digital AV sector. This scenario is similar to the Foster report's 'Transformation' world as it represents major digital advance, high levels of competition and investment, as well as accessible, diverse content (including interoperable devices, effective pricing etc) and high levels of media literacy.

Scenario B - 'Concentration': reflects a world with high geographical penetration by all digital platforms. Digital AV content is, however, accessible only through a small number of dominant proprietary services and devices, with high customer transfer costs. So whilst digital advance is evident, it is not user-friendly or affordable for all. Technical

enhancements are implemented only to facilitate audience capture, rather than effectively responding to audience demand or global trends.

The 'concentration' scenario also reflects a decline in local content provision. The limitations on consumer choice and access will favour lower risk and lower cost programme commissioning, so with the exceptions of news, weather, event coverage and advertising, domestic production in other genres will diminish significantly. Economic growth in the digital AV sector is limited due to the small number of players in the markets; this will also impact on the plurality of news and current affairs provision. This scenario is similar to Foster report's 'Consolidation' world with a trend in market consolidation and, ultimately, a limited number of 'gatekeepers' on digital content.

Scenario C – 'Fragmentation': reflects a world with fragmentary and uncoordinated penetration by digital platforms, predominantly in high-density population centres only. Online is the mainstream technology, with many users spending significant time each day in virtual gaming, gambling, personal content creation, blogging, fantasy lives or trading. Global content is accessible through a broad array of wireline and wireless devices. The relative cost of competing with this influx of global content and the economic returns of catering for audiences on the 'wrong-side' of the digital divide has ensured that local content production is acutely limited.

The emergence of online as a mainstream source for AV content has been met by the rise in one-to-one targeted advertising as a major revenue source. There are also high levels of spam and sophisticated electronic crime: hence, there is increased official monitoring, censorship and lack of privacy. There is some sporadic economic development in niche AV markets. This scenario is similar to the Foster report's 'Extreme Fragmentation' world with user-generated content displacing traditional media content and audiences becoming increasingly 'niche'.

Scenario D – 'Stagnation': reflects a world where digital AV content is available only in metropolitan centres and for the affluent, and there is, consequently, a 'digital chasm' between the 'haves' and 'have nots', with some consumers having high levels of digital use and literacy, and others, particularly in rural and remote areas and the elderly, excluded. Commercial broadcasting remains the major source of content delivery as new technology adoption stalls. Online content is monopolised by two or three proprietary services, at a relatively high cost to users. Considerations of advertising revenue and access fees dominate content provision and there is little diversity.

The local content market continues in genres that offer good, relatively safe commercial returns for broadcasters, leading to a decline in innovation and some key genres including local comedy and current affairs. There is paucity in the range and quantity of available, reliable, independent news, current affairs and information. Economic benefits from the digital AV sector are limited by restraints on new market entrants and the nature of competition amongst the incumbents. This scenario is similar to the Foster report's 'Stagnation' world with limited economic and technological evolution.

7.2.3. Credibility of the scenarios

The 'Diversity' scenario suggests a market that, if not perfect, is effective. Access to content is constrained only by its market cost, but pricing structures are operating effectively, and platforms are ubiquitous and content neutral. The latter assumes that *either,* content distributors and platform operators are separate entities, *or* platforms are subject to a universal 'must carry/must pay' regime. Given the current nature of New Zealand broadcasting and telecommunication markets, both in structure and character, many features of this scenario are currently uncertain due to factors such as:

- The timescale required for developments in consumer behaviour and new technology take-up;
- The willingness of consumers to accept and respond to differing content standards on different platforms;
- Current limitations on communications infrastructure;
- The extent to which New Zealand as a small, geographically isolated market could sustain such plurality.

The 'Consolidation' scenario accommodates ubiquity of delivery but market dominance constrains access to content, particularly through vertical integration of content distribution and delivery. Consumer costs tend to be higher than in an effective market, there is less incentive for providers to compete on quality of service, and innovation proceeds at a pace more conducive to optimisation of provider revenue than satisfaction of user demand. Current influencing factors include:

- Existing wireline and wireless networks are a serious risk to ubiquity; and
- The two-player nature of most media markets in New Zealand is a threat to unconditional access.

Features of the 'Fragmentation' scenario were raised as serious concerns by stakeholders in the short to medium term. The scenario reflects a broadcasting landscape with multiplying individual AV media channels, both in prospect (IPTV, wireless broadband) and reality (new TV channels, more FM radio stations). The risk is that loss of audience share may undermine the business case for established providers, many of whom have the option (being overseas owned) of withdrawing from the market. This would leave service provision to a miscellany of small providers, whose interest would necessarily be limited to areas in which revenue margins were sustainable: i.e. metropolitan centres. The main uncertainties surrounding this scenario include:

- Continuing level of support for funding intervention in broadcasting markets;
- Current limitations on communications infrastructure;
- The sustainability of funding models to support diverse portfolios and/or niche services.

The 'Stagnation' scenario was also considered to present plausible outcomes, particularly in the short-term. The New Zealand media market is small by international standards and has a substantial rural fringe that is technically challenging and costly to service. Hence, while there may be a reasonable business case for servicing metropolitan centres (albeit with a target of fewer than two million households), delivery of services elsewhere is less attractive. Other than in urban and niche markets, there is little incentive for investment in innovation, and services in their current format could continue into obsolescence. Influencing factors on this outcome include the impact of the global market in enabling users and/or new entrants or small players to circumnavigate bottlenecks in domestic markets.

7.2.4. Desirable outcomes and key concerns

Desk research and stakeholders' views on New Zealand's present position suggest that the digital broadcasting and communications market currently include elements of provider dominance, limited infrastructure and audience fragmentation; i.e. elements of scenarios B, C and D. The logical aim of policy-makers would therefore be to look at what, if any, measures might be required to encourage the market to develop towards scenario A: Diversity.

The likelihood of achieving this directional shift across markets raises some fundamental questions about how many providers New Zealand can sustain in any given market (e.g. network and major media players) given the potential market size and the speed with which any change could or should occur. The changes in consumer behaviour and technology developments are requiring incumbents to adapt their existing funding models, but the speed and success with which these new models may evolve creates a risk of a media 'depression' in New Zealand. Such a depression could significantly and quickly deteriorate New Zealand's relatively fragile, domestic content markets.

The scenario analysis has identified eight central concerns that in turn raise a series of regulatory questions that New Zealand policy-makers need to answer:

1. Lack of clarity and consistency in regulation and policies;
2. Lack of competition in relevant markets and diversity in provision (platform, content and services);
3. Lack of investment and consequent lack of innovation in digital products and services;
4. Lack of local content – in terms of range, quantity and quality;
5. Rise of cybercrime;
6. Inadequate protection for minors and other vulnerable groups;
7. Inequality of access to digital services for both rural areas and/or disadvantaged groups;
8. Significant 'digital illiteracy' and consumer confusion.

The next and final chapter summarises a range of regulatory issues, relating to these threats, which will be further explored as the focus of the discussion and questions for consultation in Volume Two of this report.

8 Summary and Conclusion of Volume One

8.1 Summary of Issues

The previous chapter established that, from a public policy perspective, the preferable market landscape would be one with substantial diversity of both content (including a wide variety of genres and locally produced content) and services delivered across a range of platforms by a mix of content providers and platform owners (referred to as the 'Diversity' scenario).

The scenario analysis also identified eight key threats to this 'Diversity' scenario. Potential developments, such as lack of regulatory clarity and consistency, the ineffectual operation of market competition or low digital literacy could jeopardise the successful progress of a digital society in New Zealand.

The table below identifies issues raised by each threat. Reforms to the regulatory framework should take account of these issues but also incorporate sufficient flexibility in order to be able to respond to further developments and change.

Exhibit 70: Key issues for consideration

Threats to 'Diversity' scenario	Threats	Issues for consideration
	Cross value chain issues	
1. Lack of clarity and consistency in regulation and policies	1,2,3,6	Should NZ consolidate the regulation of content, distribution and networks into a single regulator and / or consolidate the legal basis for media regulation into a single Act (itself consistent with telecoms regulation)? ...Should NZ take specific action to define and treat converging markets both in terms of competition law and other areas of jurisdictional overlap?
2. Lack of competition in relevant markets and diversity in provision (platform, content and services)	2,4	Should changes to media ownership (including cross-platform) or foreign investment rules be considered?
	2,3	Does NZ need to make any policy adjustments to encourage investment and to ensure the digital broadcasting industries are yielding optimal economic return to NZ (e.g. investment in digital content, infrastructure)?
3. Lack of investment and consequent lack of innovation in digital products and services	8	How should NZ approach its Media Literacy programme in a digital age?
	Content	
	4	How should NZ ensure availability of diverse content across all platforms- particularly local content in a variety of genres including drama, documentaries and children's?
4. Lack of local content - in terms of range, quantity and quality	1,3,6	Are NZ's rules on advertising appropriate in digital age?
	3,4	Should NZ consider changing its public service broadcasting objectives, structure, approach and / or funding (e.g. increased contestability)?
5. Rise of cybercrime	**Distribution**	
	7,8	How can the regulator ensure that disadvantaged groups are able to access digital content (e.g. regulation of broadcasters or EPGs to ensure services for the visually impaired, captioned / signed content)?
6. Inadequate protection for minors and other vulnerable groups	4,7	Should NZ consider regulating the acquisition and/or sale of content rights (e.g. consider anti-siphoning regime)?
7. Inequality of access to digital services for both rural areas and / or disadvantaged groups	1,2,4,8	Is NZ's Copyright framework understood by consumers? Does it work equally for rights holders who are individuals / small companies as it does for large, national or multi-national companies?
	2,4	Are the rights to orphan AV works and archives sufficiently accessible?
8. Significant digital illiteracy and consumer confusion	**Network**	
	1,7	How can NZ ensure the effective use of technical standards to promote fair access and competition?
	2,3	In light of the digital broadcasting network monopolies and duopolies, what, if any, open access regimes should NZ apply across different digital broadcast networks?
	2,3	What form should the post-ASO spectrum allocation regime take?

Volume Two of this report takes each of the issues summarised in the table above, and sets out a range of regulatory options for consideration. The context for each issue is established through a discussion of its background and importance, a brief analysis of international regulatory responses, and a comment on general stakeholder views that were provided during the research phase of the review. Broad possible approaches to change are identified at three points along the regulatory continuum. These three approaches (defined as updating existing arrangements, restructuring, and reforming the regime) are accompanied by examples of specific measures that could be considered in response to the threats and issues identified.

Volume Two is a discussion document. It therefore raises a number of questions seeking feedback on the issues identified in this volume, on the overall level of regulatory change – if any – that might be warranted, and on the regulatory options that might be most appropriate to the changing and converging environment for digital broadcasting.

8.2 Conclusion

Volume One of this review, informed by an investigation of trends in technology, consumer and market, and supported by a study of the regulatory situation worldwide, has highlighted a series of issues that need to be addressed. These issues touch on the most important, and often high-level, regulatory questions raised by the transition to digital, and the convergence of broadcasting with the telecommunications sector and the internet.

The issues identified are broadly in line with the issues raised by stakeholders during the research process. However, in many areas there is a lack of industry consensus. Stakeholders are also naturally – and rightly – concerned primarily about issues of competition, access, pricing and regulatory consistency; in particular no stakeholder wants to be disadvantaged versus its competitors.

The issues identified by this review are, however, considerably broader than those raised by industry stakeholders to date. Policy-makers and regulators will need to ensure that New Zealand's regulatory regime both addresses the legitimate concerns and issues of industry players and prioritises the protection of consumer interest and the promotion of New Zealand's cultural identity and economic advancement. These market, consumer and cultural goals must be met whilst also striving to ensure that every New Zealander, irrespective of income, age, location, ethnicity or disability, can benefit from the digital transformation.

Nevertheless, the identification of issues is certainly not exhaustive. As consideration of the issues progresses, a more thorough investigation into specific subsidiary questions will be required.

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Annex 1: Glossary

Technical terms

3G	Third generation cellular technology
+DSL	The Digital Subscriber Line family of wireline data standards
ADSL, ADSL2+	Wireline broadband standards (for asynchronous data transfer, i.e. greater download than upload speeds historically seen as suitable for consumer applications)
AM	Amplitude Modulation (band – 153-1610 kHz)
ARPU	Average Revenue Per User
ASO	Analogue switch off (or 'over'), in relation to analogue terrestrial broadcasting
AV	Audio-visual
Backhaul	Those parts of an electronic communications network that carry bulk traffic. Backhaul capacity determines how much data can be delivered to the periphery of the network.
CDMA	Cellular radio standard, less common globally than the GSM family of standards
CoP	Code(s) of Practice
CPE	Consumer Premises Equipment (eg, telephone handset, STB, IT modem)
DAB	Digital Audio Broadcasting (also a digital audio broadcasting standard)
DRM	Digital Rights Management – management of intellectual property and copyright issues relating to digital media (also the anti-copying systems programmed into, for example, CDs and DVDs)
DTT	Digital Terrestrial Television
DTV	Digital television
DVR	Digital video recorder (see also PVR)

e-GIF	e-Government Interoperability Framework, a set of interoperability standards for ICT and (latterly) radiocommunications
EPG	Electronic Programme Guide – an interactive programme listing, often embedded within a STB
FM	Frequency Modulation (radio broadcasting band – 87.5-108.0 MHz)
FTA	Free–to-air broadcasting or broadcasters
FFTH	Fibre to the home – i.e. a complete optical-fibre network from studio to end-user
FFTN	Fibre to the node – i.e. an optical fibre backbone delivering content to a local exchange or server
GPS	Global Positioning System, a satellite-based location tool reportedly accurate to within 10 metres
GSM	Most widely used family of global cellular radio standards (Global System for Mobile)
HDTV	High Definition TV (see SDTV)
Hybrid STB	A set-top-box that has a wireline or wireless connection to an IT network
ICT	Information and Communications Technology
IP	Internet Protocol, a technical standard for data traffic
IPTV	Internet Protocol TV, typically referring to a closed, subscription based television platform over broadband managed by a telecoms operator
ISP	Internet Service Provider
MPEG (1-4)	Video recording and transmission standards
NZ	New Zealand
Peer-to-peer, P2P	PCs in peer-to-peer networks typically act both as terminals and servers, rather than working to a common ISP server.

PMSE	Programme Making and Special Events, a particular broadcasting category (genre)
PROBE	Provincial Broadband Extension, a broadband deployment initiative
PVR	Personal video recorder, normally part of an enhanced STB (see also DVR)
SDTV	Standard Definition TV (see also HDTV)
STB	Set top box (digital signal decoder)
Triple-play	The delivery of telephony, TV and broadband through a single delivery platform
UGC	User-generated content
UHF	Ultra High Frequency (band – 300 MHz-3 GHz)
UMTS	Cellular telephony standard permitting higher volumes of data than GSM or second generation CDMA
Up-link	Transmission from the content receiver to the content source, required for interactive AV media services
VHF	Very High Frequency (band – 30 MHz-300 MHz)
VOD	Video on demand
VoIP	Voice Over Internet Protocol, an internet telephony standard
WCDMA	Common global cellular radio standard for 3G, part of the GSM family of standards
Web TV	broadcasting-like content received over a broadband network, via a PC
Wi-Fi, WiMAX	Wireless broadband standards
Wireline	Copper wire and fibre-optical cable (as opposed to wireless or cellular)

Organisations

ABC	Australian Broadcasting Corporation
ACMA	Australian Communications and Media Authority
BBC	British Broadcasting Corporation (UK)
BSA	Broadcasting Standards Authority (NZ)
BT	British Telecom (UK)
CCMAU	Crown Company Monitoring Advisory Unit
CNN	Cable News Network (USA)
CRTC	Canadian Radio-television and Telecommunications Commission
EC	European Commission
EDC	Cabinet Economic Development Committee
EU	European Union
FCC	Federal Communications Commission (USA)
Freeview (Ltd)	FTA television broadcasters' consortium (NZ)
ITT	Information Technology and Telecommunications group of the MED
ITV	Independent Television network (UK)
JDA	Johnson Dick Associates, a transmission company
Kordia	Subsidiary of a state-owned transmission company, formerly BCL/THL
MCH	Ministry for Culture and Heritage
MED	Ministry of Economic Development
MediaWorks	formerly Canwest (RadioWorks and TVWorks), owner of TV3, C4 and various radio stations.
MORST	Ministry of Research, Science and Technology
MTS	Māori Television Service

NPRT ..... National Pacific Radio Trust

NTIA ..... National Telecommunications and Information Administration (USA)

NZ On Air ..... New Zealand On Air (Broadcasting Commission)

NZRFU ..... New Zealand Rugby Football Union

OECD ..... Organisation for Economic Cooperation and Development

Ofcom ..... UK Office of Communications

PBS ..... Public Broadcasting Service (USA)

RNZ ..... Radio New Zealand

Radio NZI / RNZI ..... Radio New Zealand International

RSPP ..... Radio Spectrum Policy and Planning group of the MED

S4C ..... Channel 4 Wales television network (Sianel Pedwar Cymru)

SingTel ..... A telecoms company providing satellite communications to New Zealand via its Optus subsidiary (Singapore)

SKY, SKY TV ..... SKY Network Television Ltd (NZ)

TMP ..... Te Māngai Pāho (Māori Broadcasting Commission)

TPK ..... Te Puni Kōkiri

TRN ..... The Radio Network

TVNZ ..... Television New Zealand

Other terms

PSB ..... Public Service Broadcasting

PSM ..... Public Service Media

Te Reo Māori ..... The Māori language

TVWF ..... Television Without Frontiers Directive – European Commission

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